

1) MA.A.1.3.2

A star's color gives an indication of its temperature and age. The chart below shows seven types of stars and the lowest recorded temperature of each type.

| Type | Lowest Temperature (in Fahrenheit degrees) | Color |
|------|--|------------|
| A | 1.35×10^4 | Blue-White |
| B | 2.08×10^4 | Blue |
| F | 1.08×10^4 | White |
| G | 9.0×10^3 | Yellow |
| K | 6.3×10^3 | Orange |
| M | 5.4×10^3 | Red |
| O | 4.5×10^4 | Blue |

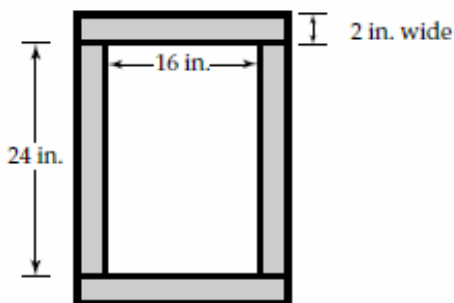
What type of star has the lowest temperature?

- A. B C. M
 B. K D. O

2) MA.B.1.3.2

Dan is making a rectangular flower box. He is using wood that is 2 inches wide to make the flower box. The diagram below shows how the completed flower box will look from above.

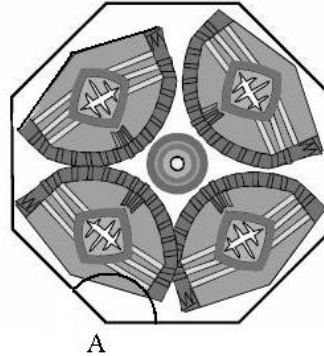
What is the perimeter, in inches, of the outside of the flower box?



Answer: _____

3) MA.C.1.3.1

Chang views the design below in his kaleidoscope. The outside border of the design is a regular octagon. What is the measure, in degrees, of $\angle A$?



- F. 45 H. 135
 G. 90 I. 180

4) MA.D.2.3.2

The value of a painting in Erin's Gallery may increase by as much as 4% of its current value from one month to the next. The gallery values a certain painting at \$500.00 in November. Which of the inequalities below represents the painting's possible values (v) in December?

- A. $500 \leq v \leq 520$ C. $500 \geq v \geq 520$
 B. $500 \leq v \leq 700$ D. $500 \geq v \geq 700$

5) MA.E.1.3.2

The low temperatures for 6 consecutive days in a Montana city were 9° , 3° , 4° , 16° , 11° , and 5° . What would the low temperature have to be on the seventh day to have a mean low temperature of 9° for the week?

- F. 8° H. 15°
 G. 9° I. 20°

1) MA.A.1.3.2

A star's color gives an indication of its temperature and age. The chart below shows seven types of stars and the lowest recorded temperature of each type.

| Type | Lowest Temperature (in Fahrenheit degrees) | Color |
|------|--|------------|
| A | 2.35×10^4 | Blue-White |
| B | 1.08×10^4 | Blue |
| F | 3.08×10^3 | White |
| G | 8.0×10^3 | Yellow |
| K | 9.3×10^3 | Orange |
| M | 5.4×10^3 | Red |
| O | 3.5×10^4 | Blue |

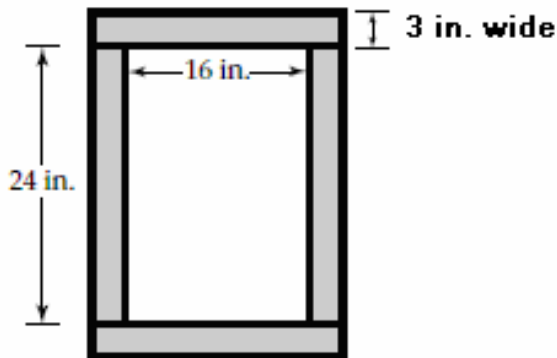
What type of star has the second lowest temperature?

Answer: _____

2) MA.B.1.3.2

Dan is making a rectangular flower box. He is using wood that is 3 inches wide to make the flower box. The diagram below shows how the completed flower box will look from above.

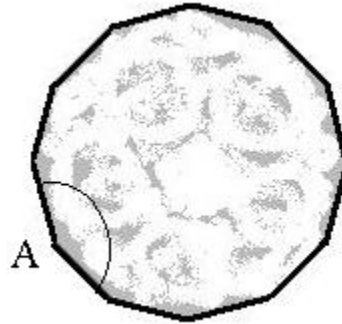
What is the perimeter, in inches, of the outside of the flower box?



Answer: _____

3) MA.C.1.3.1

Chang views the design below in his kaleidoscope. The outside border of the design is a regular dodecagon. What is the measure, in degrees, of $\angle A$?



- A. 128
 B. 150
 C. 135
 D. 144

4) MA.D.2.3.2

The value of a painting in Erin's Gallery may increase by as much as 6% of its current value from one month to the next. The gallery values a certain painting at \$500.00 in November. Which of the inequalities below represents the painting's possible values (v) in December?

- F. $500 \leq v \leq 530$ H. $500 \geq v \geq 530$
 G. $500 \leq v \leq 800$ I. $500 \geq v \geq 800$

5) MA.E.1.3.2

The low temperatures for 6 consecutive days in a Montana city were 9° , 3° , 4° , 16° , 11° , and 5° . What would the low temperature have to be on the seventh day to have a mean low temperature of 11° for the week?

- A. 8°
 B. 15°
 C. 20°
 D. 29°

1) MA.A.1.3.2

A star's color gives an indication of its temperature and age. The chart below shows seven types of stars and the lowest recorded temperature of each type.

| Type | Lowest Temperature (in Fahrenheit degrees) | Color |
|------|--|------------|
| A | 1.35×10^4 | Blue-White |
| B | 2.08×10^4 | Blue |
| F | 1.08×10^4 | White |
| G | 9.0×10^3 | Yellow |
| K | 6.3×10^3 | Orange |
| M | 5.4×10^3 | Red |
| O | 4.5×10^4 | Blue |

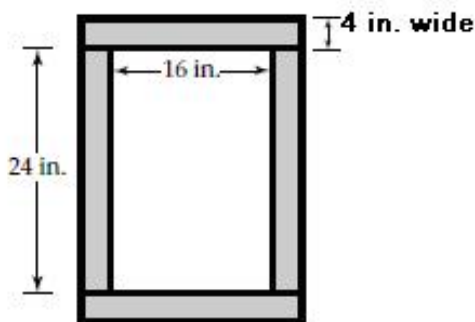
What is the median temperature?

Answer: _____

2) MA.B.1.3.2

Dan is making a rectangular flower box. He is using wood that is 4 inches wide to make the flower box. The diagram below shows how the completed flower box will look from above.

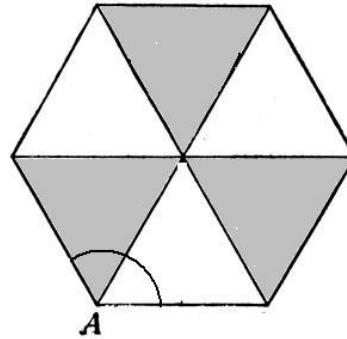
What is the perimeter, in inches, of the outside of the flower box?



Answer: _____

3) MA.C.1.3.1

Chang views the design below in his kaleidoscope. The outside border of the design is a regular hexagon. What is the measure, in degrees, of $\angle A$.



- A. 108 C. 120
 B. 128 D. 135

4) MA.D.2.3.2

The value of a painting in Erin's Gallery may increase by as much as 3% of its current value from one month to the next. The gallery values a certain painting at \$500.00 in November. Which of the inequalities below represents the painting's possible values (v) in December?

- F. $500 \leq v \leq 700$ H. $500 \geq v \geq 515$
 G. $500 \leq v \leq 515$ I. $500 \geq v \geq 700$

5) MA.E.1.3.2

The low temperatures for 6 consecutive days in a Montana city were 9° , 3° , 4° , 16° , 11° , and 5° . What would the low temperature have to be on the seventh day to have a mean low temperature of 8° for the week?

- A. 8° C. 15°
 B. 9° D. 20°

1) MA.A.1.3.2

A star's color gives an indication of its temperature and age. The chart below shows seven types of stars and the lowest recorded temperature of each type.

| Type | Lowest Temperature (in Fahrenheit degrees) | Color |
|------|--|------------|
| A | 1.35×10^4 | Blue-White |
| B | 2.08×10^4 | Blue |
| F | 1.08×10^4 | White |
| G | 9.0×10^3 | Yellow |
| K | 6.3×10^3 | Orange |
| M | 5.4×10^3 | Red |
| O | 4.5×10^4 | Blue |

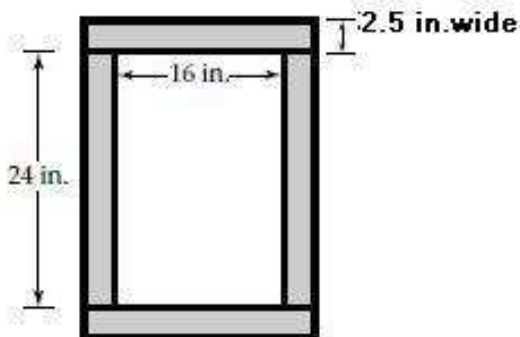
What type of star has the second lowest temperature?

Answer: _____

2) MA.B.1.3.2

Dan is making a rectangular flower box. He is using wood that is 2.5 inches wide to make the flower box. The diagram below shows how the completed flower box will look from above.

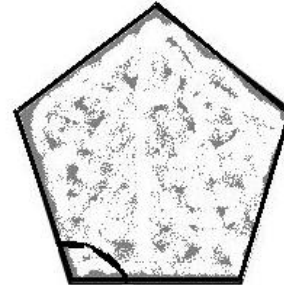
What is the perimeter, in inches, of the outside of the flower box?



Answer: _____

3) MA.C.1.3.1

Chang views the design below in his kaleidoscope. The outside border of the design is a regular pentagon. What is the measure, in degrees, of $\angle A$?



A

- A. 45 C. 108
 B. 90 D. 135

4) MA.D.2.3.2

The value of a painting in Erin's Gallery may increase by as much as 5% of its current value from one month to the next. The gallery values a certain painting at \$500.00 in November. Which of the inequalities below represents the painting's possible values (v) in December?

- F. $500 \geq v \geq 525$ H. $500 \leq v \leq 525$
 G. $500 \leq v \leq 800$ I. $500 \geq v \geq 800$

5) MA.E.1.3.2

The low temperatures for 6 consecutive days in a Montana city were 9° , 3° , 4° , 16° , 11° , and 5° . What would the low temperature have to be on the seventh day to have a mean low temperature of 7° for the week?

- A. 0° C. 5°
 B. 1° D. 15°

1) MA.A.1.3.2

A star's color gives an indication of its temperature and age. The chart below shows seven types of stars and the lowest recorded temperature of each type.

| Type | Lowest Temperature (in Fahrenheit degrees) | Color |
|------|--|------------|
| A | 1.35×10^4 | Blue-White |
| B | 2.08×10^4 | Blue |
| F | 1.08×10^4 | White |
| G | 9.0×10^3 | Yellow |
| K | 6.3×10^3 | Orange |
| M | 5.4×10^3 | Red |
| O | 4.5×10^4 | Blue |

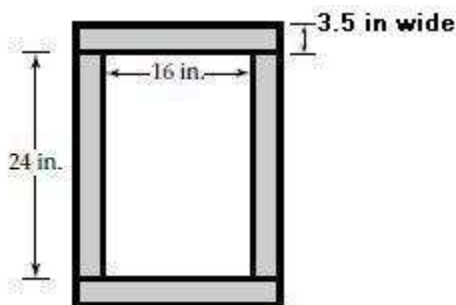
List the stars in order of highest to lowest temperature.

Answer: _____

2) MA.B.1.3.2

Dan is making a rectangular flower box. He is using wood that is 3.5 inches wide to make the flower box. The diagram below shows how the completed flower box will look from above.

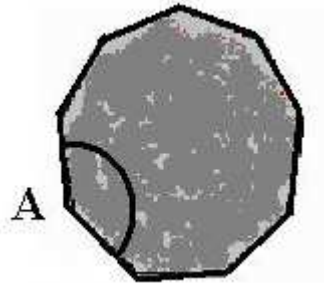
What is the perimeter, in inches, of the outside of the flowerbox?



Answer: _____

3) MA.C.1.3.1

Chang views the design below in his kaleidoscope. The outside border of the design is a regular nonagon. What is the measure, in degrees, of $\angle A$?



- A. 108
- B. 128
- C. 120
- D. 140

4) MA.D.2.3.2

The value of a painting in Erin's Gallery may increase by as much as 4% of its current value from one month to the next. The gallery values a certain painting at \$500.00 in November. Which of the inequalities below represents the painting's possible values (v) in December?

- F. $500 \leq v \leq 520$
- G. $500 \leq v \leq 700$
- H. $500 \geq v \geq 520$
- I. $500 \geq v \geq 700$

5) MA.E.1.3.2

The low temperatures for 6 consecutive days in a Montana city were 9° , 3° , 4° , 16° , 11° , and 5° . What would the low temperature have to be on the seventh day to have a mean low temperature of 6° for the week?

- A. -1°
- B. 0°
- C. 1°
- D. -6°

Name _____
Teacher _____

Math 8
Countdown Week 1

Date _____
Period _____

Answer Key

| | DAY 1 | DAY 2 | DAY 3 | DAY 4 | DAY 5 |
|----------|--------------|--------------|--------------|--------------|----------------------|
| 1 | C | M | F | K | O.B.A.F.G.K.M |
| 2 | 96 | 104 | 112 | 100 | 108 |
| 3 | H | B | C | C | D |
| 4 | A | F | G | H | F |
| 5 | H | D | A | B | D |

1) MA.A.2.3.1

As Uranus orbits the Sun, the distance from its closest point to the Sun, or its perihelion, is 1703 million miles. The distance from its farthest point, or its aphelion to the Sun, is 1.866×10^9 miles. What is the difference in these distances?

- A. 1.63×10^8 miles C. 1.701×10^9 miles
 B. 163×10^8 miles D. 1701×10^9 miles

2) MA.B.2.3.2

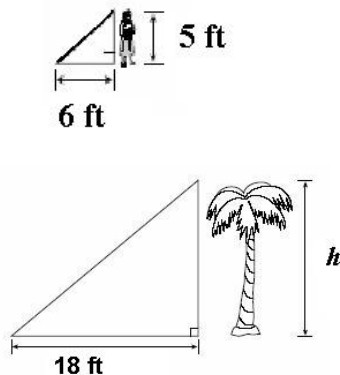
Marie is using orange juice in an experiment on citric acid. She will conduct the experiment 30 times and will use 4 ounces of juice for each experiment. How many quarts of orange juice will Marie use to complete all the experiments?

- F. 30 quarts H. 7.5 quarts
 G. 15 quarts I. 3.75 quarts

3) MA.C.3.3.1

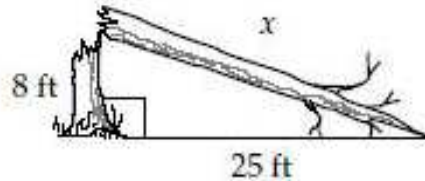
Crista works for a company that cuts down diseased palm trees before they fall and cause damage. She must determine the height of the palm tree.

Crista is 5 feet tall and has measured her shadow to be 6 feet long. At the same time, she measured the tree's shadow to be 27 feet long. What is the height (h) of the palm tree?



4) MA.D.2.3.1

A large tree in your neighbor's yard was struck by lightning and fell as shown in the diagram below. Before the owner of a tree-removal service will give an estimate to remove the tree, she must first know the length of the fallen part of the tree (x).



Which equation could be used to find the length of the fallen part of the tree?

- A. $8^2 + 25^2 = x$
 B. $\sqrt{8^2 + 25^2} = x$
 C. $25^2 - 8^2 = x$
 D. $\sqrt{25^2 - 8^2} = x$

5) MA.E.2.3.2

In a dart game, Jessie hit the bulls-eye on 15 of 20 throws. Based on these results, what are the **odds in favor** of her hitting the bulls-eye on her next throw?

- F 2 to 3 H 1 to 3
 G 3 to 2 I 3 to 1

1) MA.A.2.3.1

Neptune, the eighth, and next to last, planet from the Sun, is almost 2700 million miles away from the center of the solar system. Pluto, a small, dark, and very cold planet has an average distance from the Sun of 3.5×10^9 miles. What is the difference in these distances?

- A. 8×10^8 miles C. 8×10^9 miles
 B. 4.23×10^8 miles D. 4.23×10^9 miles

2) MA.B.2.3.2

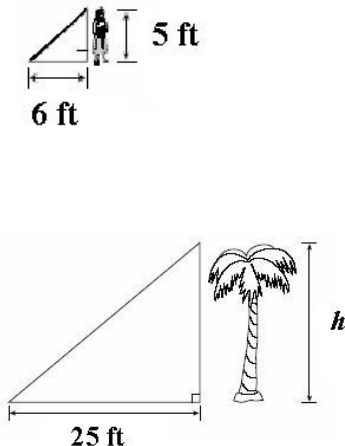
Marie is using orange juice in an experiment on citric acid. She will conduct the experiment 28 times and will use 4 ounces of juice for each experiment. How many quarts of orange juice will Marie use to complete all the experiments?

- F. 35 quarts H. 112 quarts
 G. 3.5 quarts I. 4.5 quarts

3) MA.C.3.3.1

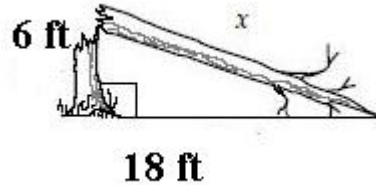
Crista works for a company that cuts down diseased palm trees before they fall and cause damage. She must determine the height of the palm tree.

Crista is 5 feet tall and has measured her shadow to be 6 feet long. At the same time, she measured the tree's shadow to be 25 feet long. What is the height (h) of the palm tree?



4) MA.D.2.3.1

A large tree in your neighbor's yard was struck by lightning and fell as shown in the diagram below. Before the owner of a tree-removal service will give an estimate to remove the tree, she must first know the length of the fallen part of the tree (x).



Which equation could be used to find the length of the fallen part of the tree?

- A. $6^2 + 18^2 = x$ C. $\sqrt{6^2 + 18^2} = x$
 B. $18^2 - 6^2 = x$ D. $\sqrt{18^2 - 6^2} = x$

5) MA.E.2.3.2

In a dart game, Jessie hit the bulls-eye on 16 of 20 throws. Based on these results, what are the **odds in favor** of her hitting the bulls-eye on her next throw?

- F. 2 to 3 H. 1 to 4
 G. 4 to 5 I. 4 to 1

1) MA.A.2.3.1

Jupiter, the largest planet, is the fifth planet from the Sun, and is the first of what are called the Outer Planets. Its average distance from the Sun is almost 467 million miles. Uranus' closest distance from the Sun is 1.703×10^9 miles. What is the difference in these distances?

- A. 2.967×10^8 miles C. 1.236×10^9 miles
 B. 2.967×10^9 miles D. 23.6×10^9 miles

2) MA.B.2.3.2

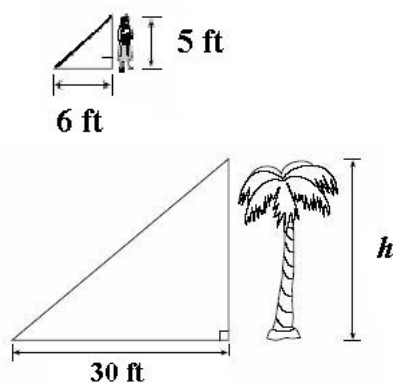
Marie is using orange juice in an experiment on citric acid. She will conduct the experiment 32 times and will use 4 ounces of juice for each experiment. How many quarts of orange juice will Marie use to complete all the experiments?

- F. 4 quarts H. 3.5 quarts
 G. 4.5 quarts I. 28.5 quarts

3) MA.C.3.3.1

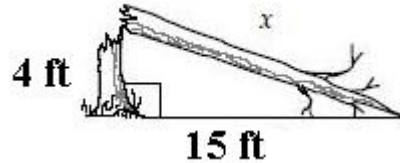
Crista works for a company that cuts down diseased palm trees before they fall and cause damage. She must determine the height of the palm tree.

Crista is 5 feet tall and has measured her shadow to be 6 feet long. At the same time, she measured the tree's shadow to be 30 feet long. What is the height (h) of the palm tree?



4) MA.D.2.3.1

A large tree in your neighbor's yard was struck by lightning and fell as shown in the diagram below. Before the owner of a tree-removal service will give an estimate to remove the tree, she must first know the length of the fallen part of the tree (x).



Find the length of side X
 (Round to the nearest hundredth).

Answer: _____

5) MA.E.2.3.2

In a dart game, Jessie hit the bulls-eye on 14 of 20 throws. Based on these results, what are the **odds in favor** of her hitting the bulls-eye on her next throw?

- A. 10 to 7 C. 7 to 3
 B. 7 to 10 D. 3 to 7

1) MA.A.2.3.1

Saturn, the Ringed Planet, is the sixth planet from the Sun. Its average distance is over 850 million miles away from the Sun. Neptune is 2700 million miles away from the sun. What is the difference in these distances?

- A. 18.5×10^8 miles C. 18.5×10^9 miles
 B. 1.85×10^8 miles D. 1.85×10^9 miles

2) MA.B.2.3.2

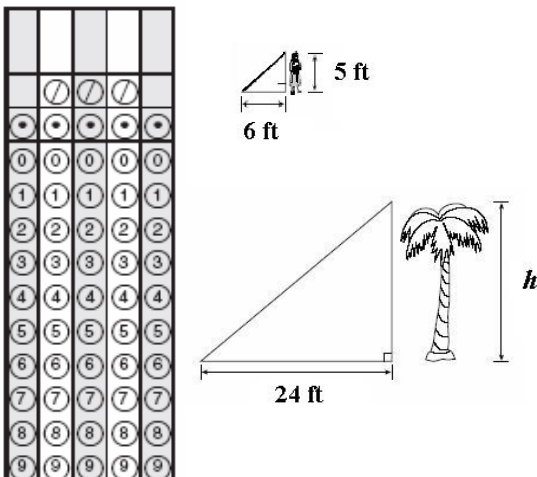
Marie is using orange juice in an experiment on citric acid. She will conduct the experiment 40 times and will use 4 ounces of juice for each experiment. How many quarts of orange juice will Marie use to complete all the experiments?

- F. 5 quarts H. 5.5 quarts
 G. 15 quarts I. 2.5 quarts

3) MA.C.3.3.1

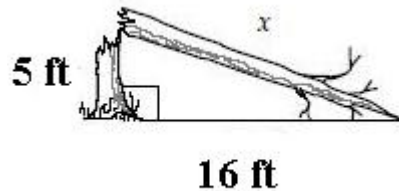
Crista works for a company that cuts down diseased palm trees before they fall and cause damage. She must determine the height of the palm tree.

Crista is 5 feet tall and has measured her shadow to be 6 feet long. At the same time, she measured the tree's shadow to be 24 feet long. What is the height (h) of the palm tree?



4) MA.D.2.3.1

A large tree in your neighbor's yard was struck by lightning and fell as shown in the diagram below. Before the owner of a tree-removal service will give an estimate to remove the tree, she must first know the length of the fallen part of the tree (x).



Find the length of side X
 (Round to the nearest hundredth).

Answer: _____

5) MA.E.2.3.2

In a dart game, Jessie hit the bulls-eye on 18 of 24 throws. Based on these results, what are the **odds against** her hitting the bulls-eye on her next throw?

- A. 1 to 3 C. 3 to 4
 B. 3 to 1 D. 4 to 3

1) MA.A.2.3.1

If Neptune is 2.7×10^9 million miles away from the Sun and Uranus is 1703 million miles away from the Sun, what is the difference in these two distances?

- A. 99.7×10^8 miles C. 9.97×10^8 miles
 B. 9.97×10^9 miles D. 99.7×10^9 miles

2) MA.B.2.3.2

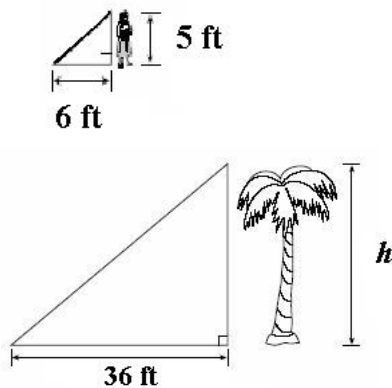
Marie is using orange juice in an experiment on citric acid. She will conduct the experiment 36 times and will use 4 ounces of juice for each experiment. How many quarts of orange juice will Marie use to complete all the experiments?

- F. 4.2 quarts H. 3.5 quarts
 G. 20 quarts I. 4.5 quarts

3) MA.C.3.3.1

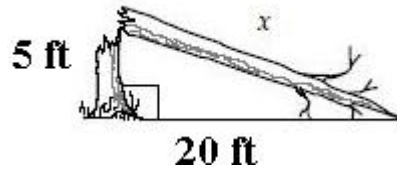
Crista works for a company that cuts down diseased palm trees before they fall and cause damage. She must determine the height of the palm tree.

Crista is 5 feet tall and has measured her shadow to be 6 feet long. At the same time, she measured the tree's shadow to be 36 feet long. What is the height (h) of the palm tree?



4) MA.D.2.3.1

A large tree in your neighbor's yard was struck by lightning and fell as shown in the diagram below. Before the owner of a tree-removal service will give an estimate to remove the tree, she must first know the length of the fallen part of the tree (x).



Find the length of side X
 (Round to the nearest hundredth).

Answer: _____

5) MA.E.2.3.2

In a dart game, Jessie hit the bulls-eye on 16 of 22 throws. Based on these results, what are the **odds against** her hitting the bulls-eye on her next throw?

- A. 8 to 3 C. 8 to 11
 B. 3 to 8 D. 11 to 3

Name _____
Teacher _____

Math 8
Countdown Week 2

Date _____
Period _____

Answer Key

| | DAY 6 | DAY 7 | DAY 8 | DAY 9 | DAY 10 |
|----------|--------------|--------------|--------------|--------------|---------------|
| 1 | A | A | C | D | C |
| 2 | I | G | F | F | I |
| 3 | 15 | 22.5 | 25 | 20 | 30 |
| 4 | B | C | 15.52 | 16.76 | 20.62 |
| 5 | I | I | C | A | B |

1) MA.A.1.3.2

Which number line is correct?

- A.
- B.
- C.
- D.

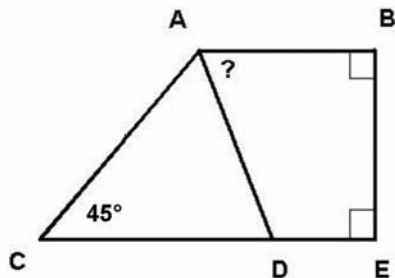
2) MA.B.2.3.1

A waiter at a steak restaurant in Neptune Beach serves a table of 5 people. Each person at the table orders a 12-ounce steak. How many pounds of steak will be delivered to this table?

- F. $1\frac{1}{2}$ H. $3\frac{3}{4}$
 G. $2\frac{1}{4}$ I. 5

3) MA.C.1.3.1

In the quadrilateral shown below, $\angle CAB$ is divided into two congruent angles by \overline{AD} . What is the measure, in degrees of $\angle DAB$?

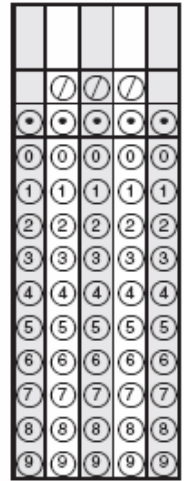


4) MAD.2.3.2

A coffee shop provides an internet connection for its customers to use. The cost is based on the formula

$$C = \$0.50 + (t \times 0.01)$$

in which C represents the total cost and t represents the number of minutes the customer uses the connection. How much would it cost to use the connection for 90 minutes?



Answer: _____

5) MAE.3.3.2

A pet food manufacturer did a national survey to find out what kind of pets families have. The results are in the table.

| Type of Pet | Percent of Families |
|-------------|---------------------|
| Dog | 42% |
| Cat | 31% |
| Fish | 12% |
| Bird | 4% |
| Other | 1% |

David did a survey of his 20 classmates to find out how many of their families have a dog or cat. He found that 12 of his 20 classmates have a dog.

How does this result compare with the national survey?

1) MA.A.1.3.2

Which number has the greatest value?

- A. 5^2 C. $21\frac{9}{16}$
 B. $\sqrt{64}$ D. 78%

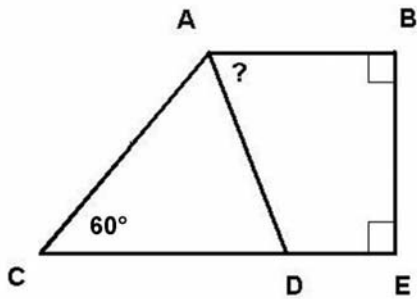
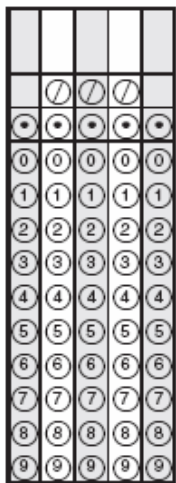
2) MA.B.2.3.1

A waiter at a steak restaurant in Neptune Beach serves a table of 4 people. Each person at the table orders a 10-ounce steak. How many pounds of steak will be delivered to this table?

- F. $1\frac{1}{2}$ H. $3\frac{3}{4}$
 G. $2\frac{1}{2}$ I. 5

3) MA.C.1.3.1

In the quadrilateral shown below, $\angle CAB$ is divided into two congruent angles by \overline{AD} . What is the measure, in degrees of $\angle DAB$?

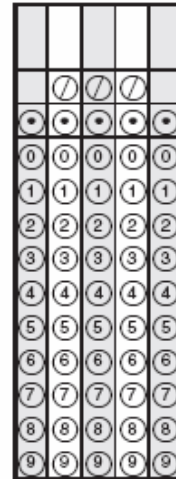


4) MAD.2.3.2

A coffee shop provides an internet connection for its customers to use. The cost is based on the formula

$$C = \$0.50 + (t \times 0.01)$$

in which C represents the total cost and t represents the number of minutes the customer uses the connection. How much would it cost to use the connection for 100 minutes?



5) MAE.3.3.2

A pet food manufacturer did a national survey to find out what kind of pets families have. The results are in the table.

| Type of Pet | Percent of Families |
|-------------|---------------------|
| Dog | 42% |
| Cat | 31% |
| Fish | 12% |
| Bird | 4% |
| Other | 1% |

David did a survey of his 20 classmates to find out how many of their families have a dog or cat. He found that 10 of his 20 classmates have a dog. How does this result compare with the national survey?

1) MA.A.1.3.2

Sherisse has \$15,000 in a savings account. She wants to invest 25% of this money in real estate. How much money is she going to have left in her savings account after she makes her investment?

- A. \$3,750 C. \$11,250
 B. \$7,500 D. \$13,500

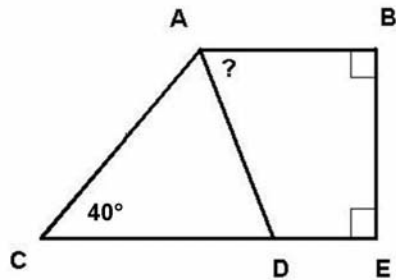
2) MA.B.2.3.1

Sammy needs 3 quarts of broth for a soup recipe. How many **cups** of broth will he need if he plans to double the recipe?

- F. 6 cups H. 12 cups
 G. 8 cups I. 24 cups

3) MA.C.1.3.1

In the quadrilateral shown below, $\angle CAB$ is divided into two congruent angles by \overline{AD} . What is the measure, in degrees of $\angle DAB$?

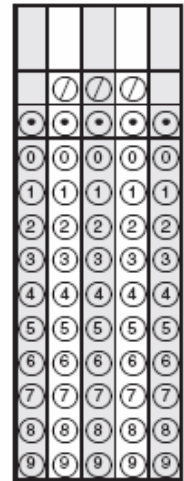


4) MAD.2.3.2

A coffee shop provides an internet connection for its customers to use. The cost is based on the formula

$$C = \$0.50 + (t \times 0.01)$$

in which C represents the total cost and t represents the number of minutes the customer uses the connection. How much would it cost to use the connection for 60 minutes?



5) MAE.3.3.2

A pet food manufacturer did a national survey to find out what kind of pets families have. The results are in the table.

| Type of Pet | Percent of Families |
|-------------|---------------------|
| Dog | 42% |
| Cat | 31% |
| Fish | 12% |
| Bird | 4% |
| Other | 1% |

David did a survey of his 20 classmates to find out how many of their families have a dog or cat. He found that 3 of his 20 classmates have a cat.

How does this result compare with the national survey?

1) MA.A.1.3.2

Sherisse has \$15,000 in a savings account. She wants to invest 20% of this money in real estate. How much money is she going to have left in her savings account after she makes her investment?

- A. \$3,750 C. \$12,000
B. \$7,500 D. \$13,500

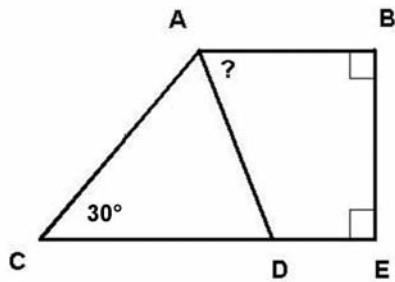
2) MA.B.2.3.1

Sammy needs 2.5 quarts of broth for a soup recipe. How many **cups** of broth will he need if he plans to double the recipe?

- F. 8 cups H. 20 cups
G. 10 cups I. 24 cups

3) MA.C.1.3.1

In the quadrilateral shown below, $\angle CAB$ is divided into two congruent angles by \overline{AD} . What is the measure, in degrees of $\angle DAB$?

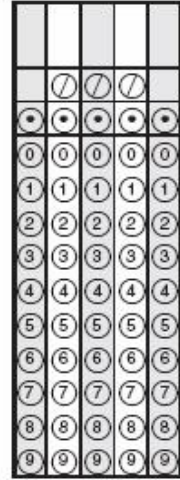


4) MAD.2.3.2

A coffee shop provides an internet connection for its customers to use. The cost is based on the formula

$$C = \$0.50 + (t \times 0.01)$$

in which C represents the total cost and t represents the number of minutes the customer uses the connection. How much would it cost to use the connection for 30 minutes?



5) MAE.3.3.2

A pet food manufacturer did a national survey to find out what kind of pets families have. The results are in the table.

| Type of Pet | Percent of Families |
|-------------|---------------------|
| Dog | 42% |
| Cat | 31% |
| Fish | 12% |
| Bird | 4% |
| Other | 1% |

David did a survey of his 20 classmates to find out how many of their families have a dog or cat. He found that 15 of his 20 classmates have a dog. How does this result compare with the national survey?

1) MA.A.1.3.2

Sherisse has \$15,000 in a savings account. She wants to invest 15% of this money in real estate. How much money is she going to have left in her savings account after she makes her investment?

- A. \$3,750 C. \$12,750
 B. \$10,500 D. \$13,500

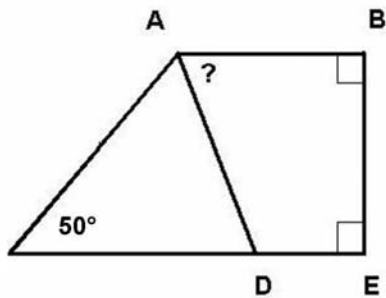
2) MA.B.2.3.1

Rickie is making a quilt that measures 2800 millimeters long. Which is the equivalent measurement in **meters**?

- F. 2.8 H. 280
 G. 28 I. 2800

3) MA.C.1.3.1

In the quadrilateral shown below, $\angle CAB$ is divided into two congruent angles by \overline{AD} . What is the measure, in degrees of $\angle DAB$?

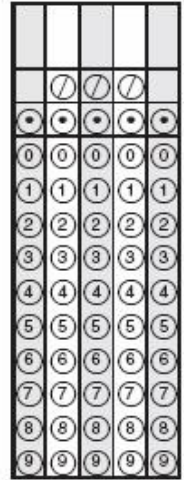


4) MAD.2.3.2

A coffee shop provides an internet connection for its customers to use. The cost is based on the formula

$$C = \$0.50 + (t \times 0.01)$$

in which C represents the total cost and t represents the number of minutes the customer uses the connection. How much would it cost to use the connection for 45 minutes?



4) MAE.3.3.2

A pet food manufacturer did a national survey to find out what kind of pets families have. The results are in the table.

| Type of Pet | Percent of Families |
|-------------|---------------------|
| Dog | 42% |
| Cat | 31% |
| Fish | 12% |
| Bird | 4% |
| Other | 1% |

David did a survey of his 20 classmates to find out how many of their families have a dog or cat. He found that 2 of his 20 classmates have a cat.

How does this result compare with the national survey?

Name _____
Teacher _____

Math 8
Countdown Week 3

Date _____
Period _____

Answer Key

| | DAY 11 | DAY 12 | DAY 13 | DAY 14 | DAY 15 |
|---|------------|------------|------------|------------|------------|
| 1 | D | A | C | C | C |
| 2 | H | G | I | H | F |
| 3 | 67.5° | 60° | 70° | 75° | 65° |
| 4 | \$1.40 | \$1.50 | \$1.10 | \$0.80 | \$0.95 |
| 5 | 60% vs 42% | 50% vs 42% | 15% vs 31% | 75% vs 42% | 10% vs 42% |

1) MA.A.3.3.1

$7 \times (9 - 3)$ is equivalent to:

- A. $(7 \times 9) - 3$ C. $(7 \times 9) - (7 \times 3)$
 B. $(7 - 9) \times (7 - 3)$ D. $(7 - 9) \times 3$

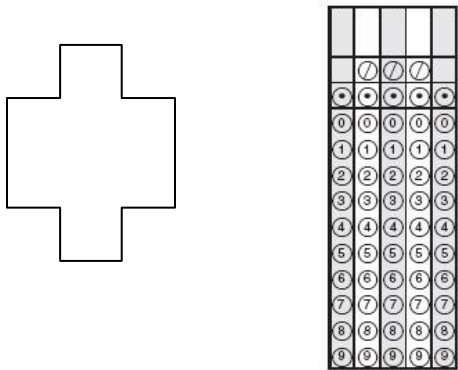
2) MA.B.1.3.1

What is the volume of a cube whose edges measure 3 inches each?

- F. 9 cubic inches H. 33 cubic inches
 G. 27 cubic inches I. 81 cubic inches

3) MA.C.2.3.1

How many lines of symmetry does the figure below have?



4) MA.D.1.3.1

Look at the table below.

| x | y |
|----|----|
| 2 | 5 |
| 5 | 11 |
| 7 | 15 |
| 10 | 21 |
| 14 | ? |

What is the value of y, when $x = 14$?

Answer: _____

5) MA.E.3.3.1

Mandy worked at a supermarket offering customers samples of new fruit drinks. Each customer selected and sampled one flavor. Mandy recorded the number of original and remaining samples by flavor on the chart.

| BOTTLED SAMPLES | | |
|-----------------|----------------------------|-----------------------------|
| Flavor | Original Number of Samples | Remaining Number of Samples |
| Lemon | 300 | 25 |
| Orange | 400 | 93 |
| Strawberry | 350 | 43 |

Which of the following statements is supported by the data in the chart?

- A. Lemon was selected the greatest number of times.
 B. Orange was selected the greatest number of times.
 C. Lemon and orange were selected an equal number of times.
 D. Orange and strawberry were selected an equal number of times.

1) MA.A.3.3.1

In the expression below, what operation will result in the **greatest** value?

$0.37 \square 1.54$

- A. division C. subtraction
 B. addition D. multiplication

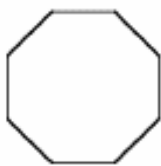
2) MA.B.1.3.1

What is the surface area of this rectangular prism?



3) MA.C.2.3.1

How many lines of symmetry does the figure below have?



Answer: _____

4) MA.D.1.3.1

Jacob is creating a number sequence. He starts with the number 1 and multiplies it by the next whole number 2. He multiplies the result by the next whole number 3. The first four numbers in the sequence are shown below.

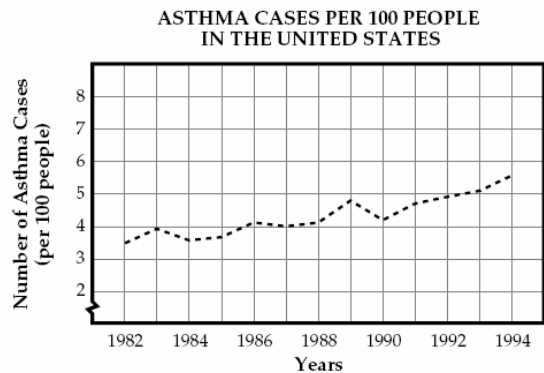
2, 6, 24, 120

What is the **sixth** number in this sequence?

Answer: _____

5) MA.E.3.3.1

The graph below shows the number of asthma cases per 100 people in the United States from 1982 to 1994.



| KEY | |
|-------|----------|
| ----- | All ages |

Which of the following claims can be supported by this data?

- F. In 1989, approximately 4% of the people in the United States had asthma.
- G. In 1990, between 4% and 5% of the people in the United States had asthma.
- H. Between 1990 and 1991, there was a decrease in the asthma rate for all ages.
- I. Between 1989 and 1990, there was an increase in the asthma rate for all ages.

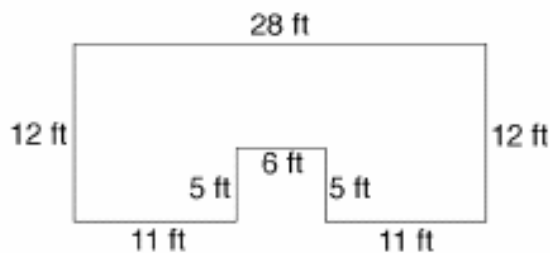
1) MA.A.1.3.4

Which of the following equations is equivalent to $3 \times (5 + z) = 24$?

- A. $5 + z = 21$ C. $15 + 3z = 24$
 B. $15z = 24$ D. $15 + z = 8$

2) MA.B.1.3.1

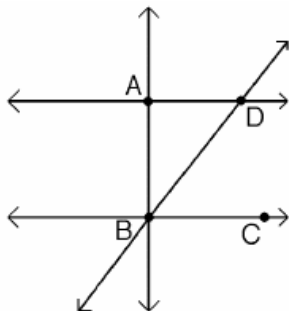
The floor plan below shows the Green family basement. How many square feet of carpet are needed to cover the floor?



Answer: _____

3) MA.C.2.3.1

In the diagram below, $\angle DAB$ measures 90° , $\angle CBD$ measures 45° and $\angle ABD$ is congruent to $\angle CBD$.



Which of the following statements is **NOT** true?

- F. $\triangle ABD$ is an equilateral triangle.
 G. $\angle ADB$ measures 45°
 H. \overline{AB} is perpendicular to \overline{BC}
 I. \overline{AD} is parallel to \overline{BC}

4) MA.D.1.3.1

Use the function table below to find the value of y when $x = 3$.

| x | y |
|-----|-----|
| 0 | -3 |
| 1 | 2 |
| 2 | 7 |
| 3 | ? |
| 4 | 17 |



5) MA.E.3.3.1

Ms. Japal wants to design an experiment to examine which gender begins walking earlier in life. Which design should produce the MOST valid results?

- A. observing a male baby and a female baby
 B. observing a large group of male babies and a large group of female babies
 C. asking a large group of male and female adults when each took their first steps
 D. asking a large group of male and female adults when their babies took their first steps

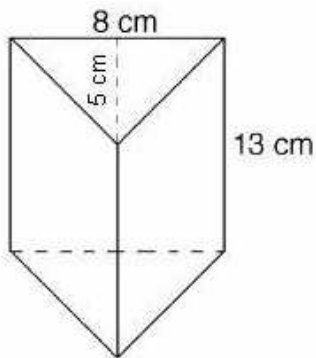
1) MA.A.3.3.1

Which of the following numbers, when multiplied by $\frac{3}{4}$, results in a number greater than $\frac{3}{4}$?

- A. $\frac{7}{8}$ C. 0.98
 B. 0 D. $\frac{6}{5}$

2) MA.B.1.3.1

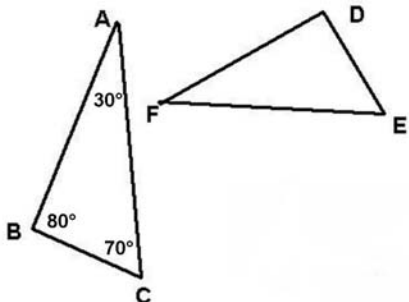
What is the volume of this triangular prism?



- F. 20 cm^3 H. 260 cm^3
 G. 32.5 cm^3 I. 520 cm^3

3) MA.C.2.3.1

Triangle ABC is congruent to triangle FDE. What is the measure, in degrees, of $\angle F$?



Answer: _____

4) MA.D.1.3.1

Which expression comes next in this pattern?

$4x, 16x, 64x, 256x, \underline{\hspace{2cm}}$

- A. $512x$ C. $2,028x$
 B. $1,024x$ D. $4,096x$

5) MA.E.3.3.1

As a tree ages, the trunk of the tree gets bigger. Scientists can estimate the age of a tree by measuring the circumference of the tree trunk.

A team of scientists believes that the trees in Florida are older than the trees in Georgia, Alabama, and Mississippi.

In which of the following geographic areas should the scientists measure the circumference of 200 trees to best test their hypothesis?

- F. one area of each state
 G. one area of Florida
 H. various areas of each state
 I. various areas of Florida

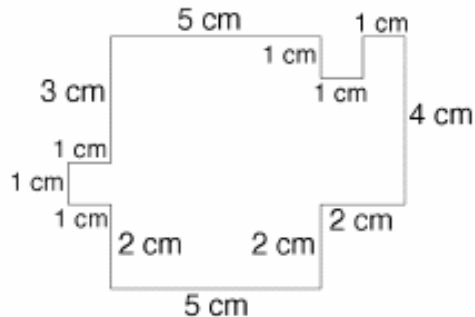
1) MA.A.3.3.1

The product of -28 and 5 is:

- A. a prime number C. a negative integer
 B. a positive integer D. a fraction

2) MA.B.1.3.1

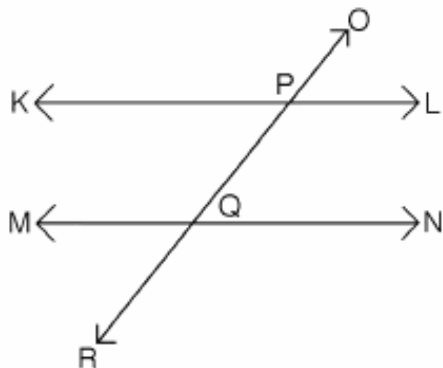
What is the area of this figure in cm²?



Answer: _____

3) MA.C.2.3.1

Lines \overline{KL} and \overline{MN} are parallel to each other. Which angle is **NOT** congruent to $\angle MQO$?



- F. $\angle RQN$ H. $\angle KPQ$
 G. $\angle QPL$ I. $\angle KPO$

4) MA.D.1.3.1

A cargo ship can hold up to 500 tons of cargo. The chart below shows how the distance from the water line to the bottom of the ship (the draft depth) is affected by the number of tons of cargo the ship is carrying.

DRAFT DEPTH OF SHIP

| Cargo (in tons) | Draft Depth (in feet) |
|-----------------|-----------------------|
| 15 | 20 |
| 20 | 22.5 |
| 25 | 25 |
| 30 | 27.5 |
| 35 | 30 |

If the pattern in the chart continues, what will be the draft depth of the ship, in feet, if the ship is carrying 40 tons of cargo?

Answer: _____

5) MA.E.3.3.1

The table shows the inventory at the beginning and at the end of one month of sales at a clothing store.

Monthly Inventory

| Items | Number of Items | |
|--------|-----------------|-----|
| | Beginning | End |
| Jeans | 550 | 105 |
| Shirts | 750 | 203 |
| Skirts | 475 | 195 |
| Socks | 550 | 25 |

If weekly sales of each type of item are almost equal, which conclusion is supported by the data in the table?

- A. The store should sell about 135 skirts each week.
 B. The store should sell about 70 skirts each week.
 C. The store should sell about the same number of jeans as socks.
 D. The store should sell about the same number of shirts as skirts.

Name _____
Teacher _____

Math 8th
Countdown Week 4

Date _____
Period _____

Answer Key

| | DAY 16 | DAY 17 | DAY 18 | DAY 19 | DAY 20 |
|----------|---------------|---------------|---------------|---------------|---------------|
| 1 | C | B | C | D | C |
| 2 | G | 302 m | 306 | H | 38 cm |
| 3 | 2 | 8 | F | 30° | H |
| 4 | 29 | 5040 | 12 | B | 32.5 |
| 5 | D | G | D | H | B |

1) **MA.A.3.3.1**

What is the value of the expression

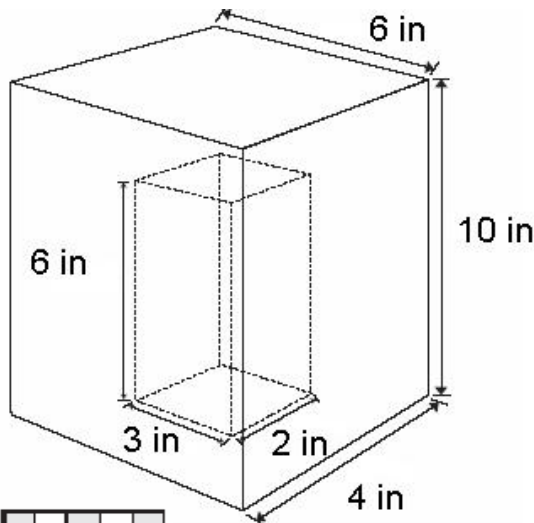
$$2 \times 7^2 - 3 \times 8 + 6 \times 5 + 4?$$

- A. 108 B. 206 C. 3,834 D. 6,444

2) **MA.B.1.3.1**

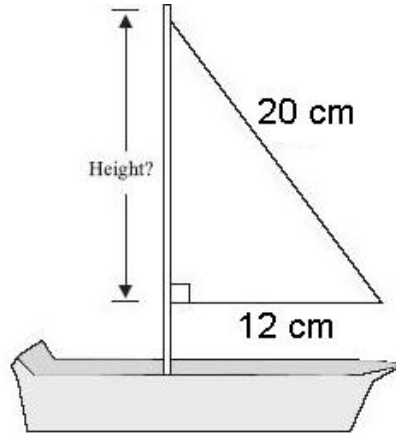
A craft shop makes small rectangular display cases that are 6 inches by 3 inches by 2 inches. The cases are shipped in rectangular boxes that are 10 inches by 6 inches by 4 inches. The extra space in the packing box is filled with packing material to protect the display case inside.

Find the **volume** of the space in the box that is filled with packing material. Show your work or explain in words how you found your answer.



3) **MA.C.2.3.1**

Sabrina enjoys sailing. She wants to build this model sailboat: What is the **height** of the model's sail in centimeters (cm)?



4) **MA.D.2.3.2**

Lee's aerobics instructor told the class that a person should maintain a target heart rate for at least 20 minutes. The equation $t = 0.7(220 - a)$, where a represents the person's age in years and t represents the target heart rate, can be used to find the person's target heart rate. What is the target heart rate of a person who is **14 years old**?

Answer: _____

5) **MA.E.2.3.2**

There are 4 sugar, 6 peanut butter, and 5 chocolate chip cookies in a bag. If you were to reach in and select a cookie, what are the **odds against** selecting a sugar cookie?

F. 4 to 11

H. 4 to 15

G. 11 to 4

I. 15 to 4

1) MA.A.3.3.1

What is the value of the expression

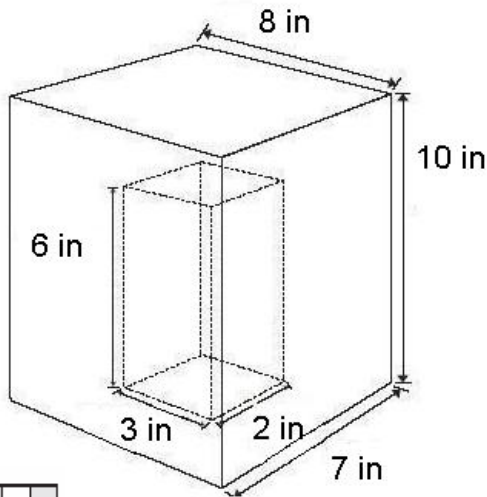
$$3 \times 2^3 - 4 \times 9 + 3 \times 6 + 8?$$

- A. 8 B. 14 C. 782 D. 1,106

2) MA.B.1.3.1

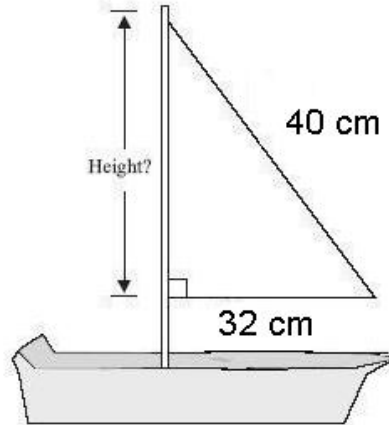
A craft shop makes small rectangular display cases that are 6 inches by 3 inches by 2 inches. The cases are shipped in rectangular boxes that are 10 inches by 8 inches by 7 inches. The extra space in the packing box is filled with packing material to protect the display case inside.

Find the **volume** of the space in the box that is filled with packing material. Show your work or explain in words how you found your answer.



3) MA.C.2.3.1

Sabrina enjoys sailing. She wants to build this model sailboat: What is the **height** of the model's sail in centimeters (cm)?



4) MA.D.2.3.2

Lee's aerobics instructor told the class that a person should maintain a target heart rate for at least 20 minutes. The equation $t = 0.7(220 - a)$, where a represents the person's age in years and t represents the target heart rate, can be used to find the person's target heart rate. What is the target heart rate of a person who is **13 years old**?

Answer: _____

5) MA.E.2.3.2

There are 4 sugar, 8 peanut butter, and 8 chocolate chip cookies in a bag. If you were to reach in and select a cookie, what are the **odds in favor** of selecting a sugar cookie?

- F. 1 to 5 H. 1 to 4
 G. 5 to 1 I. 4 to 1

1) MA.A.3.3.1

What is the value of the expression

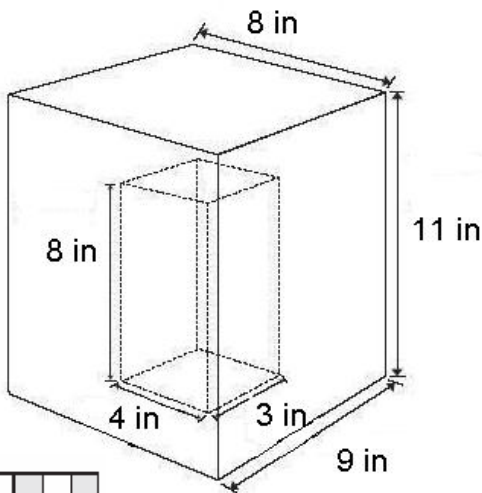
$$9 \div 3^2 - 3 \times 2 + 9 \times 8 + 7?$$

- A. 55 B. 74 C. 79 D. 108

2) MA.B.1.3.1

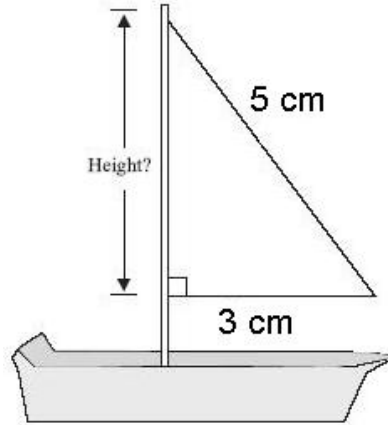
A craft shop makes small rectangular display cases that are 8 inches by 4 inches by 3 inches. The cases are shipped in rectangular boxes that are 11 inches by 9 inches by 8 inches. The extra space in the packing box is filled with packing material to protect the display case inside.

Find the **volume** of the space in the box that is filled with packing material. Show your work or explain in words how you found your answer.



3) MA.C.2.3.1

Sabrina enjoys sailing. She wants to build this model sailboat: What is the **height** of the model's sail in centimeters (cm)?



4) MA.D.2.3.2

Lee's aerobics instructor told the class that a person should maintain a target heart rate for at least 20 minutes. The equation $t = 0.7(220 - a)$, where a represents the person's age in years and t represents the target heart rate, can be used to find the person's target heart rate. What is the target heart rate of a person who is **12 years old**?

Answer: _____

5) MA.E.2.3.2

There are 4 sugar, 6 peanut butter, and 8 chocolate chip cookies in a bag. If you were to reach in and select a cookie, what are the **odds in favor** of selecting a peanut butter cookie?

- F. 1 to 3 H. 1 to 2
 G. 3 to 1 I. 2 to 1

Name _____
Teacher _____

Math 8
Countdown Week 5

Date _____
Period _____

ANSWER KEY

| | DAY 21 | DAY 22 | DAY 23 | DAY 24 | DAY 25 |
|----------|------------------|---------------|---------------|---------------|---------------|
| 1 | A | B | C | B | B |
| 2 | 204 cu in | 546 | 639 | 524 | 696 |
| 3 | 16 | 12 | 8 | 24 | 4 |
| 4 | 144.2 | 143.5 | 141.4 | 144.9 | 145.6 |
| 5 | G | G | G | H | H |

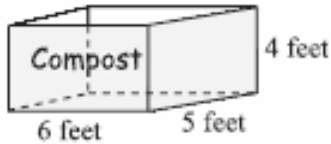
1) MA.A.3.3.3

A city youth program has a total yearly budget of \$220,000. Of the total budget, 17% is spent on administrative costs, 25% is spent on supplies, and 30% is spent on art programs. The rest of the budget is spent on sports programs. How much is spent on sports programs?

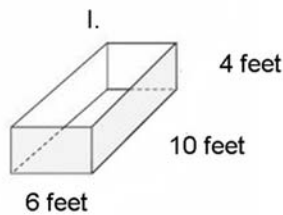
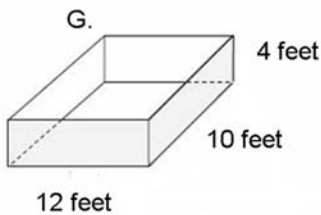
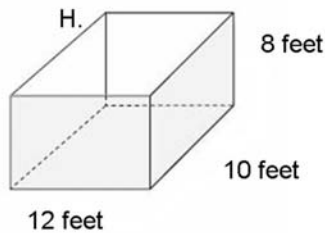
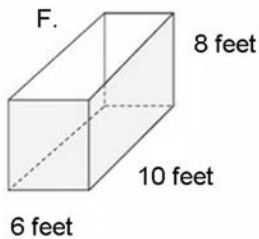
- A. \$61,600 C. \$116,000
 B. \$66,000 D. \$158,400

2) MA.B.1.3.3

Laura made a compost bin with the dimensions shown.

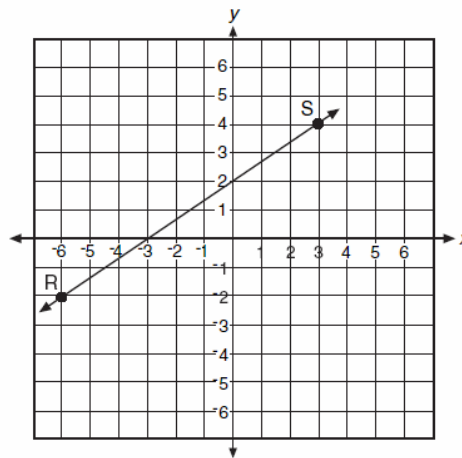


She wants to double the volume of the bin. Which of the following bins will have a volume that is twice the volume of Laura's bin?



3) MA.C.3.3.2

Line RS represents a skateboard ramp. What is the slope of the ramp?



- A. $\frac{2}{3}$
 B. $\frac{3}{2}$
 C. $-\frac{2}{3}$
 D. $-\frac{3}{2}$

4) MA.D.1.3.2

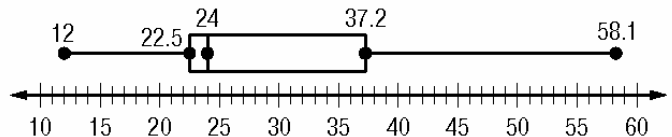
For the equation $y = 12x - 5$,

what is the value of y when $x = \frac{1}{2}$?

Answer: _____

5) MA.E.1.3.2

The box-and-whisker plot shows the yearly salaries for 9 employees in a company. Which measures can be obtained from this plot?



- A. mean and mode C. range and median
 B. mode and median D. range and mean

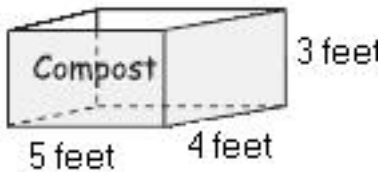
1) MA.A.3.3.3

A city youth program has a total yearly budget of \$224,000. Of the total budget, 20% is spent on administrative costs, 16% is spent on supplies, and 45% is spent on art programs. The rest of the budget is spent on sports programs. How much is spent on sports programs?

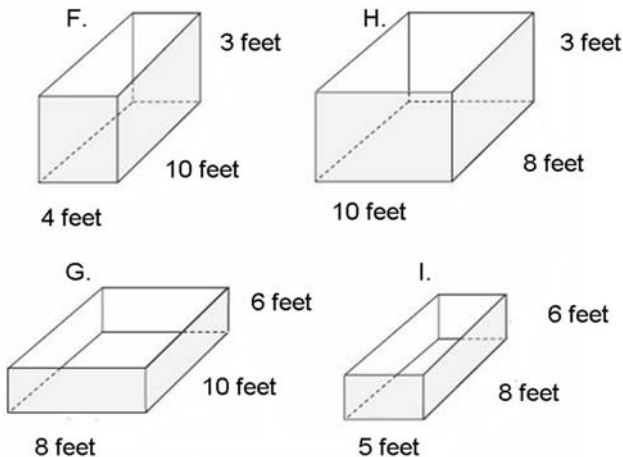
- A. \$45,600 C. \$175,000
 B. \$65,000 D. \$42,560

2) MA.B.1.3.3

Laura made a compost bin with the dimensions shown.

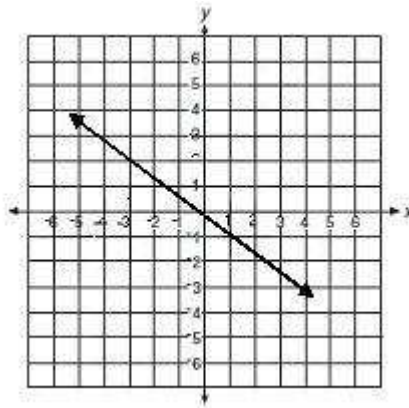


She wants to double the volume of the bin. Which of the following bins will have a volume that is twice the volume of Laura's bin?



3) MA.C.3.3.2

Line RS represents a skateboard ramp. What is the slope of the ramp?



- A $\frac{3}{4}$
 B $\frac{4}{3}$
 C $-\frac{3}{4}$
 D $-\frac{4}{3}$

4) MA.D.1.3.2

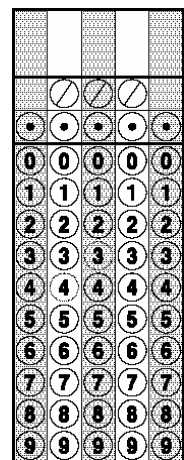
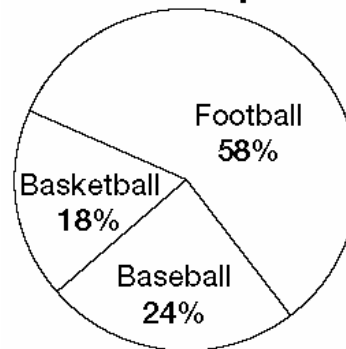
For the equation $y = 14x - 5$, what is the value of y when $x = \frac{1}{2}$?

Answer: _____

5) MA.E.1.3.2

Ulysses surveys a group of 250 students, asking them to select a favorite sport. He then makes a circle graph of his results. How many students are represented by the median of the 3 percents?

Favorite Sport



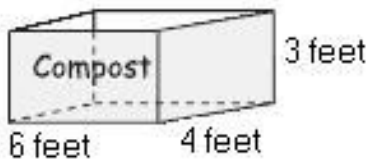
1) MA.A.3.3.3

A city youth program has a total yearly budget of \$225,000. Of the total budget, 17% is spent on administrative costs, 25% is spent on supplies, and 30% is spent on art programs. The rest of the budget is spent on sports programs. How much is spent on sports programs?

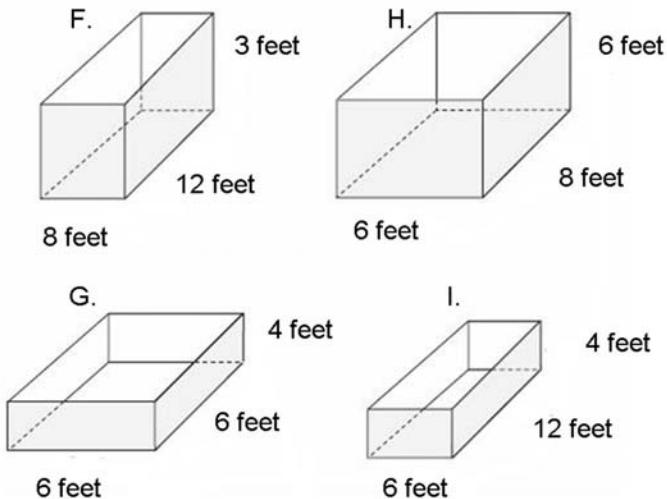
- A. \$59,400 C. \$63,000
 B. \$42,750 D. \$175,500

2) MA.B.1.3.3

Laura made a compost bin with the dimensions shown.

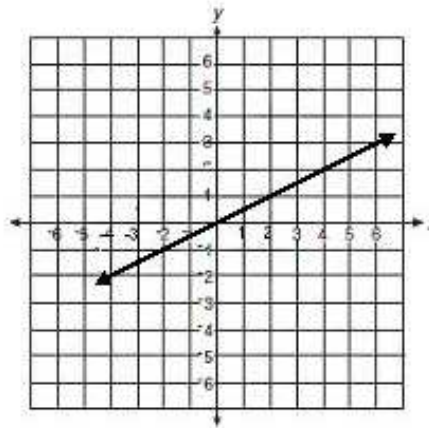


She wants to double the volume of the bin. Which of the following bins will have a volume that is twice the volume of Laura's bin?



3) MA.C.3.3.2

Line RS represents a skateboard ramp. What is the slope of the ramp?



- A $\frac{1}{2}$
 B 2
 C $-\frac{2}{4}$
 D $-\frac{4}{2}$

4) MA.D.1.3.2

For the equation $y = 16x - 5$,

What is the value of y when $x = \frac{1}{2}$?

Answer: _____

5) MA.E.1.3.2

The table shows the recommended shelf-life for each unopened item.

What is the median shelf-life for these items?

| Item | Shelf Life (months) |
|---------------|---------------------|
| Baking Powder | 18 |
| Baking Soda | 24 |
| Cocoa Mix | 24 |
| Coffee | 24 |
| Cold Cereal | 8 |
| Cornmeal | 12 |
| Regular Pasta | 36 |
| Semi-sweet | 18 |
| Wheat Flour | 7 |

Answer: _____

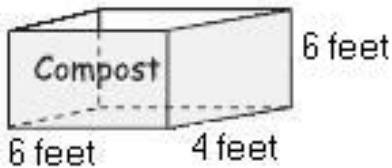
1) MA.A.3.3.3

A city youth program has a total yearly budget of \$200,000. Of the total budget, 15% is spent on administrative costs, 28% is spent on supplies, and 38% is spent on art programs. The rest of the budget is spent on sports programs. How much is spent on sports programs?

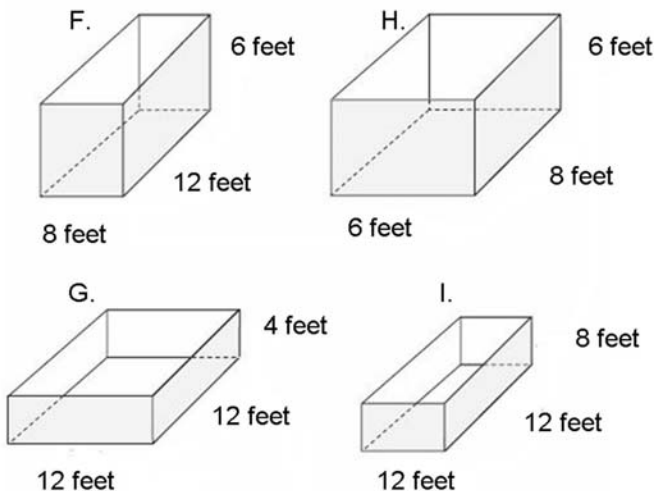
- A. \$61,600
- B. \$66,000
- C. \$38,000
- D. \$158,400

2) MA.B.1.3.3

Laura made a compost bin with the dimensions shown.

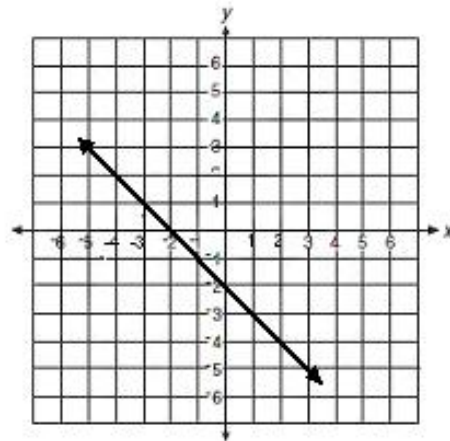


She wants to double the volume of the bin. Which of the following bins will have a volume that is twice the volume of Laura's bin?



3) MA.C.3.3.2

Line RS represents a skateboard ramp. What is the slope of the ramp?



- A. 1
- B. $\frac{3}{4}$
- C. -1
- D. $-\frac{4}{3}$

4) MA.D.1.3.2

For the equation $y = 18x - 5$, what is the value of y when $x = \frac{1}{2}$?

Answer: _____

5) MA.E.1.3.2

What is the range (in hours) of fishing time in the data set?

| Name | Time Spent Fishing |
|--------|--------------------|
| Taariq | 2.5 |
| Macon | 3.25 |
| Genna | 1.75 |
| Oro | 2.25 |
| Wray | 3.5 |
| Fabian | 2 |

Answer: _____

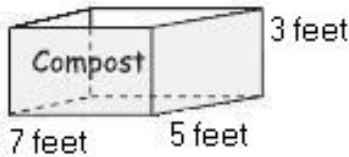
1) MA.A.3.3.3

A city youth program has a total yearly budget of \$250,000. Of the total budget, 18% is spent on administrative costs, 25% is spent on supplies, and 30% is spent on art programs. The rest of the budget is spent on sports programs. How much is spent on sports programs?

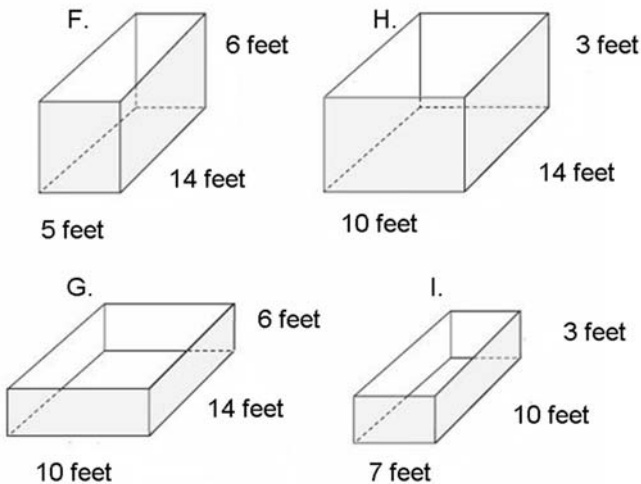
- A. \$65,700
- B. \$67,500
- C. \$165,000
- D. \$107,400

2) MA.B.1.3.3

Laura made a compost bin with the dimensions shown.

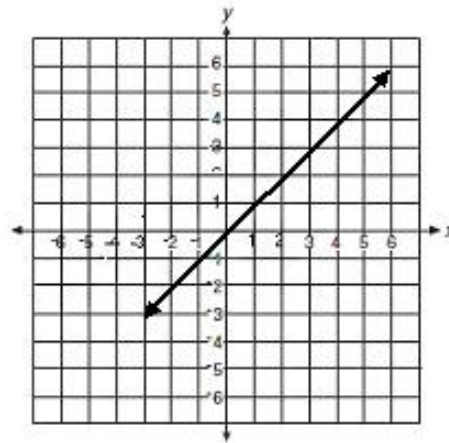


She wants to double the volume of the bin. Which of the following bins will have a volume that is twice the volume of Laura's bin?



3) MA.C.3.3.2

Line RS represents a skateboard ramp. What is the slope of the ramp?



- A. $\frac{1}{3}$
- B. 1
- C. $\frac{3}{1}$
- D. $-\frac{1}{3}$

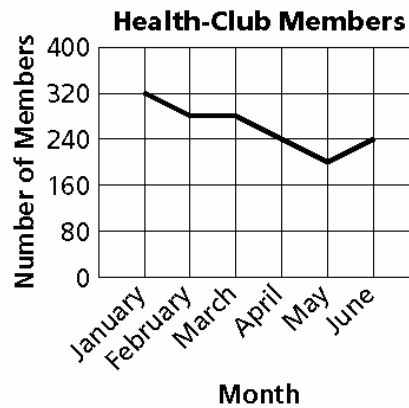
4) MA.D.1.3.2

For the equation $y = 20x - 5$, what is the value of y when $x = \frac{1}{2}$?

Answer: _____

5) MA.E.1.3.2

What is the mean number of members this health club serves during the half-year?



Answer: _____

Name _____
Teacher _____

Math 8
Countdown Week 6

Date _____
Period _____

ANSWERS

| | DAY 26 | DAY 27 | DAY 28 | DAY 29 | DAY 30 |
|----------|---------------|---------------|---------------|---------------|---------------|
| 1 | A | D | C | C | B |
| 2 | I | F | G | H | I |
| 3 | A | C | A | C | B |
| 4 | 1 | 2 | 3 | 4 | 5 |
| 5 | C | 60 | 18 | 1.75 | 260 |

1) MA.A.1.3.4

The brightest star in the Milky Way galaxy, Pistol, was discovered in 1997. Pistol is one million times brighter than the Sun. What is the exponent associated with base 10 when one million is written in scientific notation?

Answer: _____

2) MA.B.1.3.4.

A brochure advertises a new public golf course. The cover of the brochure shows a picture of the 18th hole on the course. The distance from the tee to the 18th hole is 4.5 inches on the brochure. Based on the scale below, what is the distance in yards?

| SCALE |
|-----------------------|
| 0.5 inches = 50 yards |

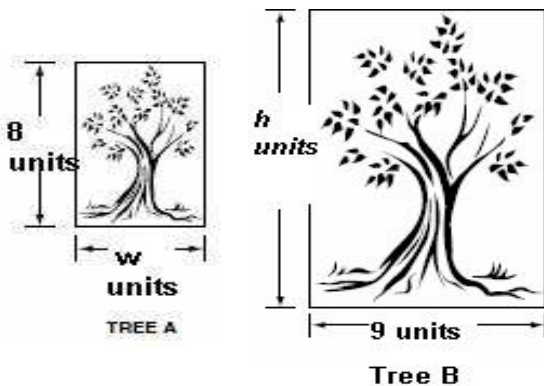
- A. 900 yards C. 225 yards
 B. 450 yards D. 113 yards

3) MA.C.2.3.1

In graphics class, Ben made two prints of trees on similar sheets of paper. Write a proportion, using w and h , which could be used to find the width of the paper used for Tree A or the height of the paper used for Tree B.

Proportion _____

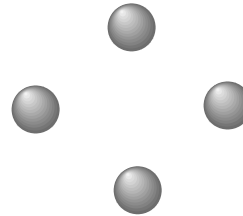
If the width of the paper used for Tree A is 6 units, what is the height of the paper used for Tree B?



Answer: _____

4) MA.D.1.3.2

An architect designed a park with 4 different play areas as shown in the diagram below. The architect wants to connect each play area directly to each of the other play areas with cement walkways.



The expression $\frac{n(n-1)}{2}$,

where n represents the number of play areas, can be used to determine how many different walkways are needed. How many walkways are needed to connect the 4 play areas?

Answer: _____

5) MA.E.1.3.2

The Hendersons are considering buying a house. They recorded mortgage interest rates for a six-month period, as shown in the chart below. What was the **mean** mortgage interest rate, in **percent**, for this six-month period?

MORTGAGE INTEREST RATES

| Month | Interest Rate (in percent) |
|--------|----------------------------|
| March | 7.8 |
| April | 8.0 |
| May | 7.75 |
| June | 7.6 |
| July | 7.25 |
| August | 7.5 |



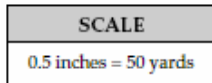
1) MA.A.1.3.4

The brightest star in the Milky Way galaxy, Pistol, was discovered in 1997. Pistol is a hundred million times brighter than the Sun. What is the exponent associated with base 10 when a hundred million is written in scientific notation?

Answer: _____

2) MA.B.1.3.4.

A brochure advertises a new public golf course. The cover of the brochure shows a picture of the 18th hole on the course. The distance from the tee to the 18th hole is 3.5 inches on the brochure. Based on the scale below, what is the distance in yards?



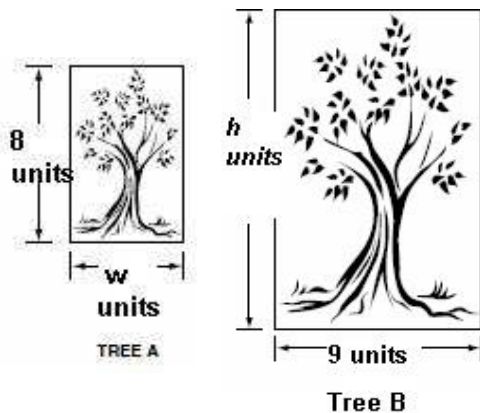
- A. 900 yards C 350 yards
 B 450 yards D 125 yards

3) MA.C.2.3.1

In graphics class, Ben made two prints of trees on similar sheets of paper. Write a proportion, using *w* and *h*, which could be used to find the width of the paper used for Tree A or the height of the paper used for Tree B.

Proportion _____

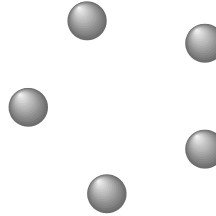
If the width of the paper used for Tree A is 4 units, what is the height of the paper used for Tree B?



Answer: _____

4) MA.D.1.3.2

An architect designed a park with 5 different play areas as shown in the diagram below.



The architect wants to connect each play area directly to each of the other play areas with cement walkways. The expression $\frac{n(n-1)}{2}$, where *n* represents the number of play areas, can be used to determine how many different walkways are needed. How many walkways are needed to connect the 5 play areas?

Answer: _____

5) MA.E.1.3.2

The Hendersons are considering buying a house. They recorded mortgage interest rates for a six-month period, as shown in the chart below. What was the **mean** mortgage interest rate, in **percent**, for this six-month period?

MORTGAGE INTEREST RATES

| Month | Interest Rate (in percent) |
|----------|----------------------------|
| January | 6.8 |
| February | 7.0 |
| March | 6.75 |
| April | 6.6 |
| May | 6.25 |
| June | 6.5 |



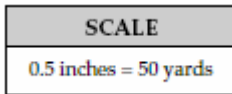
1) MA.A.1.3.4

The brightest star in the Milky Way galaxy, Pistol, was discovered in 1997. Pistol is ten million times brighter than the Sun. What is the exponent associated with base 10 when ten million is written in scientific notation?

Answer: _____

2) MA.B.1.3.4.

A brochure advertises a new public golf course. The cover of the brochure shows a picture of the 18th hole on the course. The distance from the tee to the 18th hole is 2.5 inches on the brochure. Based on the scale below, what is the distance in yards?



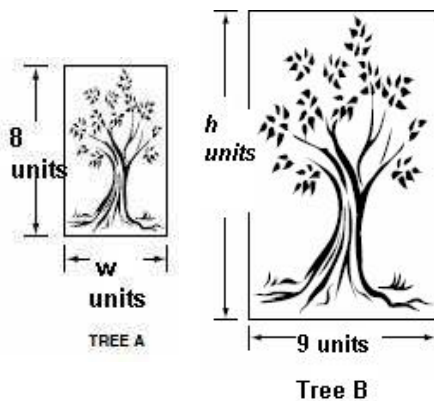
- A. 900 yards C 250 yards
 B 450 yards D 113 yards

3) MA.C.2.3.1

In graphics class, Ben made two prints of trees on similar sheets of paper. Write a proportion, using w and h , which could be used to find the width of the paper used for Tree A or the height of the paper used for Tree B.

Proportion _____

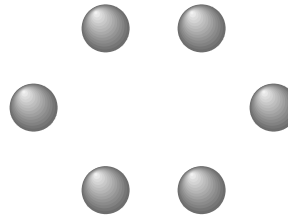
If the width of the paper used for Tree A is 3 units, what is the height of the paper used for Tree B?



Answer: _____

4) MA.D.1.3.2

An architect designed a park with 6 different play areas as shown in the diagram below.



The architect wants to connect each play area directly to each of the other play areas with cement walkways. The expression $\frac{n(n-1)}{2}$,

where n represents the number of play areas, can be used to determine how many different walkways are needed. How many walkways are needed to connect the 6 play areas?

5) MA.E.1.3.2

The Hendersons are considering buying a house. They recorded mortgage interest rates for a six-month period, as shown in the chart below.

What was the **mean** mortgage interest rate, in **percent**, for this six-month period?

| MORTGAGE INTEREST RATES | |
|-------------------------|------|
| January | 5.8 |
| February | 6.0 |
| March | 5.75 |
| April | 5.6 |
| May | 5.25 |
| June | 5.5 |

Answer: _____

1) MA.A.1.3.4

The brightest star in the Milky Way galaxy, Pistol, was discovered in 1997. Pistol is one billion times brighter than the Sun. What is the exponent associated with base 10 when one billion is written in scientific notation?

Answer: _____

2) MA.B.1.3.4.

A brochure advertises a new public golf course. The cover of the brochure shows a picture of the 18th hole on the course. The distance from the tee to the 18th hole is 5.5 inches on the brochure. Based on the scale below, what is the distance in yards?

| SCALE |
|-----------------------|
| 0.5 inches = 50 yards |

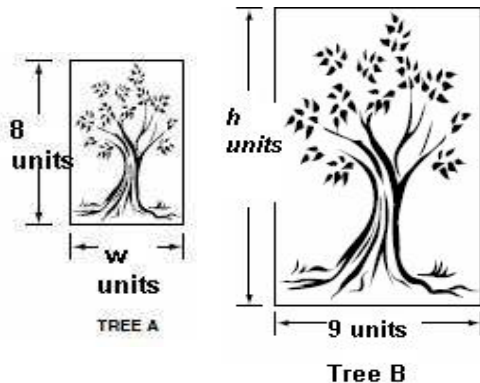
- A. 900 yards C. 225 yards
 B. 550 yards D. 113 yards

3) MA.C.2.3.1

In graphics class, Ben made two prints of trees on similar sheets of paper. Write a proportion, using w and h , which could be used to find the width of the paper used for Tree A or the height of the paper used for Tree B.

Proportion _____

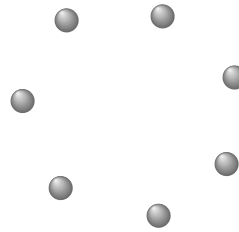
If the width of the paper used for Tree A is 2 units, what is the height of the paper used for Tree B?



Answer: _____

4) MA.D.1.3.2

An architect designed a park with 7 different play areas as shown in the diagram below.



The architect wants to connect each play area directly to each of the other play areas with cement walkways. The expression $\frac{n(n-1)}{2}$, where n represents the number of play areas, can be used to determine how many different walkways are needed. How many walkways are needed to connect the 7 play areas?

Answer: _____

5) MA.E.1.3.2

The Hendersons are considering buying a house. They recorded mortgage interest rates for a six-month period, as shown in the chart below. What was the **mean** mortgage interest rate, in **percent**, for this six-month period?

| MORTGAGE INTEREST RATES | |
|-------------------------|------|
| January | 4.8 |
| February | 5.0 |
| March | 4.75 |
| April | 4.6 |
| May | 4.25 |
| June | 4.5 |

Answer: _____

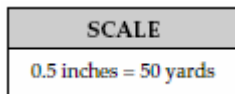
1) MA.A.1.3.4

The brightest star in the Milky Way galaxy, Pistol, was discovered in 1997. Pistol is ten billion times brighter than the Sun. What is the exponent associated with base 10 when ten billion is written in scientific notation?

Answer: _____

2) MA.B.1.3.4.

A brochure advertises a new public golf course. The cover of the brochure shows a picture of the 18th hole on the course. The distance from the tee to the 18th hole is 6.25 inches on the brochure. Based on the scale below, what is the distance in yards?



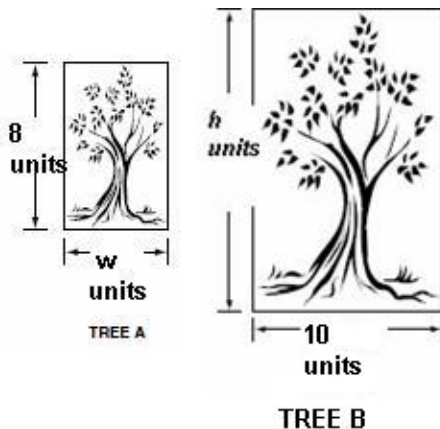
- A. 900 yards C 625 yards
 B 650 yards D 113 yards

3) MA.C.2.3.1

In graphics class, Ben made two prints of trees on similar sheets of paper. Write a proportion, using w and h , which could be used to find the width of the paper used for Tree A or the height of the paper used for Tree B.

Proportion _____

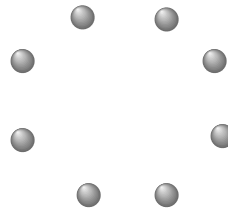
If the width of the paper used for Tree A is 4 units, what is the height of the paper used for Tree B?



Answer: _____

4) MA.D.1.3.2

An architect designed a park with 8 different play areas as shown in the diagram below.



The architect wants to connect each play area directly to each of the other play areas with cement walkways. The expression $\frac{n(n-1)}{2}$, where n represents the number of play areas, can be used to determine how many different walkways are needed. How many walkways are needed to connect the 8 play areas?

Answer: _____

5) MA.E.1.3.2

The Hendersons are considering buying a house. They recorded mortgage interest rates for a six-month period, as shown in the chart below. What was the **mean** mortgage interest rate, in **percent**, for this six-month period?

| MORTGAGE INTEREST RATES | |
|-------------------------|------|
| January | 8.8 |
| February | 9.0 |
| March | 8.75 |
| April | 8.6 |
| May | 8.25 |
| June | 8.5 |

Answer: _____

Name _____
Teacher _____

Math 8
Countdown Week 7

Date _____
Period _____

ANSWERS

| | DAY 31 | DAY 32 | DAY 33 | DAY 34 | DAY 35 |
|----------|-----------------------------|-----------------------------|-----------------------------|-----------------------------|------------------------------|
| 1 | 6 | 8 | 7 | 9 | 10 |
| 2 | B | C | C | B | C |
| 3 | $\frac{w}{8} = \frac{9}{h}$ | $\frac{w}{8} = \frac{9}{h}$ | $\frac{w}{8} = \frac{9}{h}$ | $\frac{w}{8} = \frac{9}{h}$ | $\frac{w}{8} = \frac{10}{h}$ |
| | 12 units | 18 units | 24 units | 36 units | 20 units |
| 4 | 6 | 10 | 15 | 21 | 28 |
| 5 | 7.65 | 6.65 | 5.65 | 4.65 | 8.65 |

1) MA.A.3.3.3

A used-car dealer needed to sell a car. He priced it at \$4500 the first day it was on the lot. The second day he reduced the price by 5%. What was the price of the car after this **reduction**?

Answer: _____

2) MA.B.1.3.2

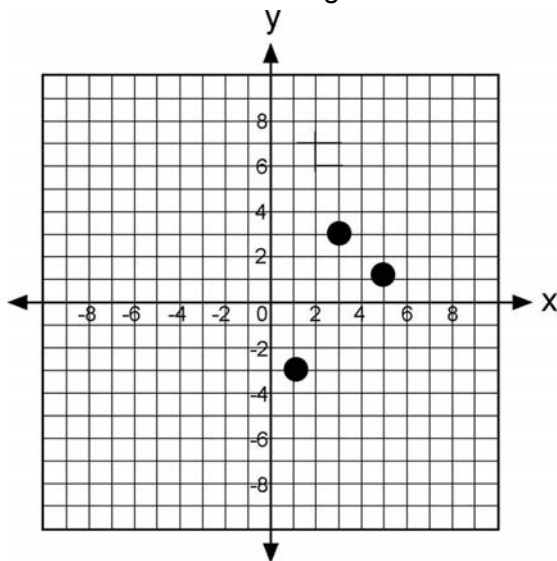
The rates for Aaron's cellular phone service are displayed below. During the first month Aaron used his phone for 151 minutes on weekends, 200 minutes on weeknights, and 32 minutes on weekdays. According to the rates on the chart, how much should Aaron be charged for his phone service the first month?

| PHONE RATES | |
|-------------|-------------------|
| Weekdays | \$0.12 per minute |
| Weeknights | \$0.07 per minute |
| Weekends | \$0.05 per minute |

Answer: _____

3) MA.C.3.3.2

Hilde wanted to draw a **parallelogram** on a coordinate plane. She gave the following coordinates for three of the four vertices of the parallelogram: (3 , 3), (5 , 1) and (1 , -3). Which coordinates best represent the location of the fourth vertex of the figure?



- F. (1 , -1) H. (-1 , 1)
 G. (-1 , -1) I. (5 , -4)

4) MA.D.2.3.2

When Ryan lifts weights for his first set, he lifts 15 pounds less than half of the maximum weight he can lift. This is represented by the equation below, where **m** represents the maximum weight Ryan can lift, and **f** represents the weight of his first set.

$$f = \frac{1}{2} m - 15$$

If the weight of Ryan's first set is 135 pounds, what is the **maximum** weight he can lift?

- A. 52.5 pounds C. 285.0 pounds
 B. 60.0 pounds D. 300.0 pounds

5) MA.E.2.3.2

One of the banks in Key West is moving to a new office building. The floor plan of the new location is shown below. All of the offices around the perimeter of the building have windows. The three corner offices have been assigned to managers, and a random drawing will be used to assign the remaining offices.

FLOOR PLAN

| | | | | | | | |
|-----------|--|--------|---------|--------|--------|--------|--------|
| Manager | office | office | Manager | | | | |
| office | <table border="1"> <tbody> <tr> <td>office</td> <td>office</td> </tr> <tr> <td>office</td> <td>office</td> </tr> </tbody> </table> | | office | office | office | office | office |
| office | | | office | | | | |
| office | | | office | | | | |
| rest room | office | | | | | | |
| elevator | office | | | | | | |
| stairs | office | office | Manager | | | | |

What are the **odds in favor** of the next person being assigned an office with a window?

- F. 8 to 4 H. 11 to 4
 G. 4 to 8 I. 4 to 11

1) MA.A.3.3.3

A used-car dealer needed to sell a car. He priced it at \$4500 the first day it was on the lot. The second day he reduced the price by 6%. What was the price of the car after this **reduction**?

Answer: _____

2) MA.B.1.3.2

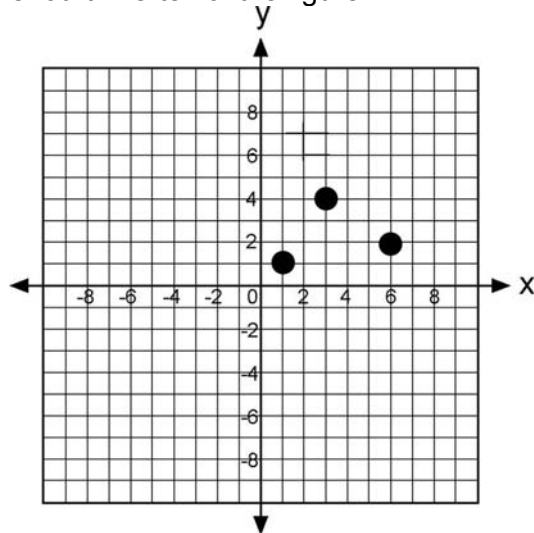
The rates for Aaron's cellular phone service are displayed below. During the first month Aaron used his phone for 155 minutes on weekends, 210 minutes on weeknights, and 30 minutes on weekdays. According to the rates on the chart, how much should Aaron be charged for his phone service the first month?

| PHONE RATES | |
|-------------|-------------------|
| Weekdays | \$0.12 per minute |
| Weeknights | \$0.07 per minute |
| Weekends | \$0.05 per minute |

Answer: _____

3) MA.C.3.3.2

Hilde wanted to draw a **parallelogram** on a coordinate plane. She gave the following coordinates for three of the four vertices of the parallelogram: (1 , 1), (3 , 4) and (6 , 2). Which coordinates best represent the location of the fourth vertex of the figure?



- F. (0 , 4) H. (-4 , 1)
 G. (4 , -1) I. (6 , 0)

4) MA.D.2.3.2

When Ryan lifts weights for his first set, he lifts 15 pounds less than half of the maximum weight he can lift. This is represented by the equation below, where **m** represents the maximum weight Ryan can lift, and **f** represents the weight of his first set.

$$f = \frac{1}{2} m - 15$$

If the weight of Ryan's first set is 145 pounds, what is the **maximum** weight he can lift?

- A. 160.0 pounds C. 320.0 pounds
 B. 80.0 pounds D. 300.0 pounds

5) MA.E.2.3.2

One of the banks in Key West is moving to a new office building. The floor plan of the new location is shown below. All of the offices around the perimeter of the building have windows. The three corner offices have been assigned to managers, and a random drawing will be used to assign the remaining offices.

FLOOR PLAN

| | | | |
|-----------|---------------|--------|---------|
| Manager | office | office | Manager |
| office | office office | | office |
| rest room | | | office |
| elevator | office office | | office |
| stairs | | | office |
| | | | Manager |

What are the **odds against** the next person being assigned an office with a window:

- F. 4 to 8 H. 11 to 4
 G. 8 to 4 I. 4 to 11

1) MA.A.3.3.3

A used-car dealer needed to sell a car. He priced it at \$4500 the first day it was on the lot. The second day he reduced the price by 7%. What was the price of the car **after this reduction**?

Answer: _____

2) MA.B.1.3.2

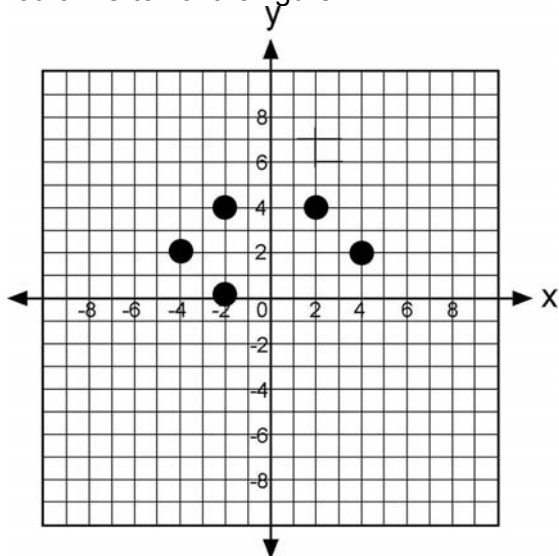
The rates for Aaron's cellular phone service are displayed below. During the first month Aaron used his phone for 150 minutes on weekends, 205 minutes on weeknights, and 31 minutes on weekdays. According to the rates on the chart, how much should Aaron be charged for his phone service the first month?

| PHONE RATES | |
|-------------|-------------------|
| Weekdays | \$0.12 per minute |
| Weeknights | \$0.07 per minute |
| Weekends | \$0.05 per minute |

Answer: _____

3) MA.C.3.3.2

Hilde wanted to draw a **hexagon** on a coordinate plane. She gave the following coordinates for three of the five vertices of the hexagon: $(-2, 0)$, $(-4, 2)$, $(-2, 4)$, $(2, 4)$ and $(4, 2)$. Which coordinates best represent the location of the fourth vertex of the figure?



- F. $(2, -1)$ H. $(2, 0)$
 G. $(0, 2)$ I. $(1, -2)$

4) MA.D.2.3.2

When Ryan lifts weights for his first set, he lifts 15 pounds less than half of the maximum weight he can lift. This is represented by the equation below, where m represents the maximum weight Ryan can lift, and f represents the weight of his first set.

$$f = \frac{1}{2}m - 15$$

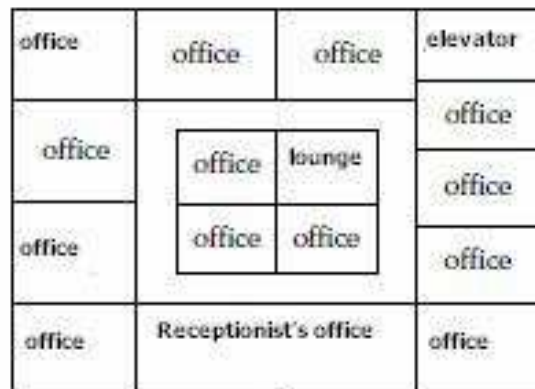
If the weight of Ryan's first set is 155 pounds, what is the **maximum weight** he can lift?

- A. 60.5 pounds C. 285.0 pounds
 B. 170.0 pounds D. 340.0 pounds

5) MA.E.2.3.2

Another bank in Key West is moving to a new office building. The floor plan of this new location is shown below. All of the offices around the perimeter of the building have windows. The inner offices do not have windows.

FLOOR PLAN



What are the **odds in favor** of getting an office with a window?

- F. 3 to 10 H. 3 to 13
 G. 10 to 3 I. 10 to 13

1) MA.A.3.3.3

A used-car dealer needed to sell a car. He priced it at \$4500 the first day it was on the lot. The second day he reduced the price by 8%. What was the price of the car after this **reduction**?

Answer: _____

2) MA.B.1.3.2

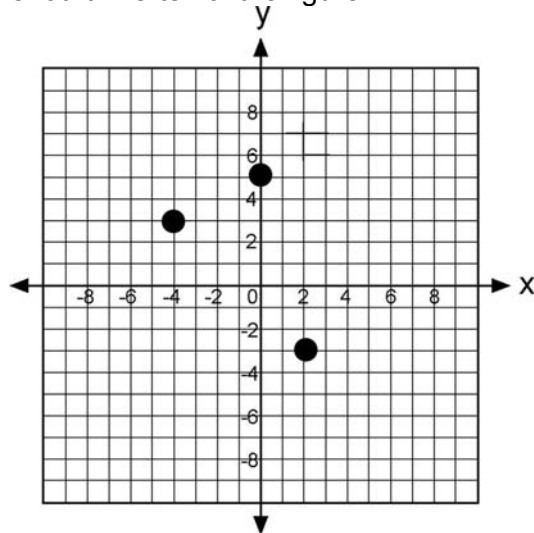
The rates for Aaron's cellular phone service are displayed below. During the first month Aaron used his phone for 145 minutes on weekends, 215 minutes on weeknights, and 35 minutes on weekdays. According to the rates on the chart, how much should Aaron be charged for his phone service the first month?

| PHONE RATES | |
|-------------|-------------------|
| Weekdays | \$0.12 per minute |
| Weeknights | \$0.07 per minute |
| Weekends | \$0.05 per minute |

Answer: _____

3) MA.C.3.3.2

Hilde wanted to draw a **parallelogram** on a coordinate plane. She gave the following coordinates for three of the four vertices of the parallelogram: $(-4, 3)$, $(0, 5)$ and $(2, -3)$. Which coordinates best represent the location of the fourth vertex of the figure?



- F. $(5, 1)$ H. $(-1, 6)$
 G. $(4, -1)$ I. $(6, -1)$

4) MA.D.2.3.2

When Ryan lifts weights for his first set, he lifts 15 pounds less than half of the maximum weight he can lift. This is represented by the equation below, where m represents the maximum weight Ryan can lift, and f represents the weight of his first set.

$$f = \frac{1}{2}m - 15$$

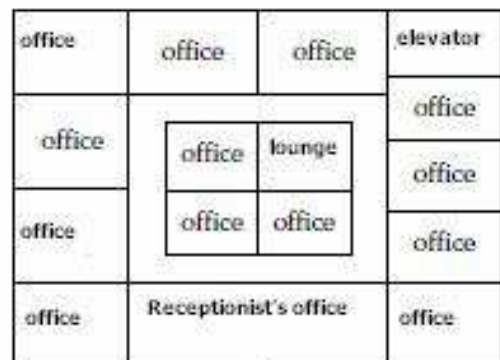
If the weight of Ryan's first set is 125 pounds, what is the maximum weight he can lift?

- A. 110.0 pounds C. 280.0 pounds
 B. 140.0 pounds D. 300.0 pounds

5) MA.E.2.3.2

Another bank in Key West is moving to a new office building. The floor plan of this new location is shown below. All of the offices around the perimeter of the building have windows. The inner offices do not have windows.

FLOOR PLAN



What are the **odds against** getting an office with a window?

- F. 3 to 10 H. 3 to 13
 G. 10 to 3 I. 10 to 13

1) MA.A.3.3.3

A used-car dealer needed to sell a car. He priced it at \$4500 the first day it was on the lot. The second day he reduced the price by 10%. What was the price of the car after this **reduction**?

Answer: _____

2) MA.B.1.3.2

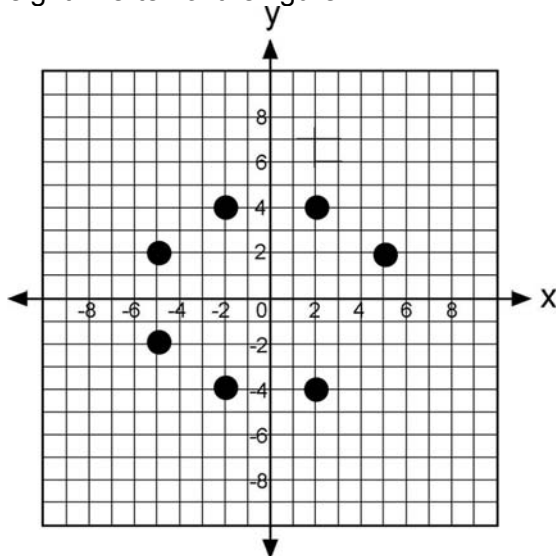
The rates for Aaron's cellular phone service are displayed below. During the first month Aaron used his phone for 147 minutes on weekends, 220 minutes on weeknights, and 40 minutes on weekdays. According to the rates on the chart, how much should Aaron be charged for his phone service the first month?

| PHONE RATES | |
|-------------|-------------------|
| Weekdays | \$0.12 per minute |
| Weeknights | \$0.07 per minute |
| Weekends | \$0.05 per minute |

Answer: _____

3) MA.C.3.3.2

Hilde wanted to draw an **octagon** on a coordinate plane. She gave the following coordinates for seven of the eight vertices of the parallelogram: (2 , -4), (-2 , -4), (-5 , -2), (-5 , 2), (-2 , 4), (2 , 4), and (5 , 2). Which coordinates best represent the location of the eighth vertex of the figure?



- F. (-5 , -2) H. (5 , 2)
 G. (-5 , -2) I. (5 , -2)

4) MA.D.2.3.2

When Ryan lifts weights for his first set, he lifts 15 pounds less than half of the maximum weight he can lift. This is represented by the equation below, where **m** represents the maximum weight Ryan can lift, and **f** represents the weight of his first set.

$$f = \frac{1}{2} m - 15$$

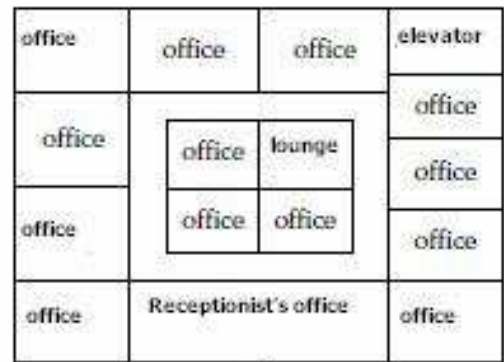
If the weight of Ryan's first set is 160 pounds, what is the **maximum** weight he can lift?

- A. 145.0 pounds C. 280.0 pounds
 B. 175.0 pounds D. 350.0 pounds

5) MA.E.2.3.2

Another bank in Key West is moving to a new office building. The floor plan of this new location is shown below. All of the offices around the perimeter of the building have windows. The inner offices do not have windows.

FLOOR PLAN



What are the **odds in favor** of getting a corner office with a window?

- F. 3 to 10 H. 3 to 13
 G. 10 to 3 I. 10 to 13

Name _____
Teacher _____

Math 8
Countdown Week 8

Date _____
Period _____

ANSWER KEY

| | DAY 36 | DAY 37 | DAY 38 | DAY 39 | DAY 40 |
|----------|----------------|----------------|----------------|----------------|----------------|
| 1 | \$4275 | \$4230 | \$4185 | \$4140 | \$4050 |
| 2 | \$25.39 | \$26.05 | \$25.57 | \$26.50 | \$27.55 |
| 3 | G | G | H | I | I |
| 4 | D | C | D | C | D |
| 5 | F | F | G | F | F |