

Basic Skills Test, Form D**Skill 1: Decimal Operations**

1. Find $3.055 + 0.06$.
A. 3.115 B. 4.15 C. 3.015 D. 3.655 1. _____
2. Find $0.4 - 0.18$.
A. 0.382 B. 0.14 C. 0.22 D. 0.32 2. _____
3. What is the product of 1.94 and 2.5?
A. 4.83 B. 4.65 C. 4.75 D. 4.85 3. _____
4. Eight gallons of gas costs \$9.36. How much does one gallon of gas cost?
A. \$1.17 B. \$1.07 C. \$1.22 D. \$1.02 4. _____

Skill 2: Factors and Prime Numbers

5. Which number has the prime factorization $2 \times 2 \times 3 \times 3 \times 5$?
A. 60 B. 180 C. 270 D. 90 5. _____
6. Find the prime factorization of 140.
A. $2 \times 3 \times 5 \times 9$ B. $2 \times 5 \times 5 \times 7$
C. $2 \times 2 \times 5 \times 7$ D. $2 \times 2 \times 3 \times 5$ 6. _____
7. What is the greatest common factor of 16 and 100?
A. 2 B. 4 C. 8 D. 25 7. _____
8. The local model airplane club has a set of 27 biplanes and a set of 36 single-wing airplanes. Each set can be divided equally among the club's members. What is the greatest possible number of members?
A. 3 B. 4 C. 6 D. 9 8. _____



Basic Skills Test, Form D (continued)**Skill 3: Fraction Operations**

9. Find $\frac{7}{8} + \frac{5}{6}$.
A. $1\frac{17}{24}$ B. $\frac{6}{7}$ C. $1\frac{3}{4}$ D. $1\frac{2}{3}$ 9. _____
10. Find $5\frac{3}{5} - 3\frac{3}{10}$.
A. $2\frac{3}{5}$ B. $1\frac{3}{10}$ C. $2\frac{3}{10}$ D. $2\frac{7}{10}$ 10. _____
11. What is the product of $\frac{3}{4}$ and $2\frac{2}{5}$?
A. $2\frac{3}{10}$ B. $1\frac{3}{10}$ C. $1\frac{3}{5}$ D. $1\frac{4}{5}$ 11. _____
12. Find $\frac{3}{10} \div \frac{2}{5}$.
A. $\frac{3}{25}$ B. $\frac{3}{10}$ C. $\frac{3}{4}$ D. $\frac{6}{25}$ 12. _____

Skill 4: Exponent Awareness

13. Simplify the expression $(10 - 5)^2$.
A. 25 B. -5 C. 5 D. 0 13. _____
14. Write the expression $0.4 \times 0.4 \times 0.4 \times 0.4 \times 0.4$ using exponents.
A. $10^{0.4}$ B. 0.4^4 C. 0.4^5 D. $5^{0.4}$ 14. _____
15. Simplify the expression $(-3)^4$.
A. -12 B. 81 C. -81 D. 12 15. _____
16. Which expression represents the volume of a cube whose edge length is 30 units?
A. 3^{30} B. 3^{10} C. $3(30)$ D. 30^3 16. _____

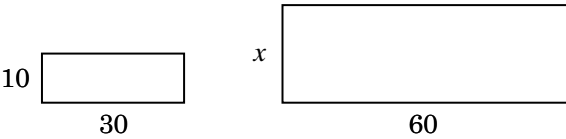
Basic Skills Test, Form D (continued)

Skill 5: Proportional Reasoning

17. Which ratio is *not* equivalent to the others?
 A. 4 : 5 B. 5 : 7 C. 12 : 15 D. 8 : 10 17. _____

18. What is the missing term in the proportion $\frac{y}{12} = \frac{15}{20}$?
 A. 10 B. 6 C. 32 D. 9 18. _____

19. Below are two similar figures. Find x .
 A. 10
 B. 15
 C. 20
 D. 30



19. _____

20. A map has a scale of 1 cm : 1,000 m. How many centimeters on the map represents 1,500 m?
 A. 1.5 cm B. 0.67 cm C. 6.7 cm D. 15 cm 20. _____

Skill 6: Percents

21. Convert $\frac{5}{6}$ to percent.
 A. 8.3% B. 12% C. 83.3% D. 1.2% 21. _____

22. Which group does *not* consist of equivalent numbers?
 A. $\frac{7}{8}$, 0.8, 80% B. $\frac{6}{20}$, 0.3, 30%
 C. $\frac{45}{10}$, 4.5, 450% D. $\frac{3}{12}$, 0.25, 25% 22. _____

23. Suppose the sales tax rate is 5%. How much sales tax would be charged for an item priced at \$50.00?
 A. \$1.00 B. \$.25 C. \$10.00 D. \$2.50 23. _____

24. 80 is 40% of what number?
 A. 320 B. 200 C. 32 D. 20 24. _____



Basic Skills Test, Form D (continued)

Skill 7: Finding Perimeter, Area, and Volume

25. Find the perimeter and area of a rectangle 5 in. wide and 8 in. long.

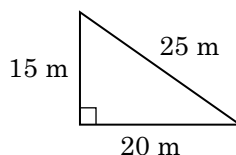
A. 13 in. and 40 in.²
C. 26 in. and 40 in.²

B. 13 in. and 20 in.²
D. 26 in. and 20 in.²

25. _____

26. What is the area of the triangle?

A. 60 m²
B. 300 m²
C. 250 m²
D. 150 m²



26. _____

27. The formula for the area of a circle is πr^2 . Find the radius of a circle whose area is 50.24 cm².

A. 16 cm B. 4 cm C. 8 cm D. 40 cm

27. _____

28. What is the volume of a rectangular prism with length 8 ft, width 5 ft, and height 4 ft?

A. 160 ft³ B. 125 ft³ C. 40 ft³ D. 17 ft³

28. _____

Skill 8: Integer Awareness

29. Choose the true statement.

A. $-3 > 2$ B. $-2 < 3$ C. $0 < -2$ D. $-4 > 4$

29. _____

30. The temperature in the Yukon Territory usually ranges from -42°C to -2°C in December. Which temperature is *not* likely to be measured in the Yukon Territory in December?

A. -41°F B. -10°C C. -6°C D. 0°C

30. _____

31. Order the integers 0, 10, 25, -5 , 15, and -1 from least to greatest.

A. 25, 15, 10, -5 , -1 , 0 B. -1 , -5 , 0, 10, 15, 25
C. -5 , -1 , 0, 10, 15, 25 D. 0, -1 , -5 , 10, 15, 25

31. _____

32. Which expression is *not* equivalent to the opposite of $+2$?

A. $|-2|$ B. -2 C. $-|-2|$ D. $-|2|$

32. _____



Basic Skills Test, Form D (continued)**Skill 9: Integer Operations**

33. Find the value of the expression $4 - 8 + (-4)$.
A. 4 B. -8 C. 8 D. 0 33. _____
34. One night the temperature outside was 17°F . The temperature dropped 26°F overnight. Which expression can you use to find the temperature in the morning?
A. $17 - (-26)$ B. $26 + (-17)$
C. $-26 + (-17)$ D. $17 + (-26)$ 34. _____
35. What is the product of -4 and -60 ?
A. -240 B. 240 C. 260 D. -260 35. _____
36. Find $100 \div (-20)$.
A. -5 B. -20 C. 80 D. 5 36. _____

Skill 10: Translating Words into Mathematical Expressions

37. Which variable expression corresponds to “2 less than a number”?
A. $2 - x$ B. $x - 2$ C. $x \div 2$ D. $x + 2$ 37. _____
38. Which word phrase could correspond to the variable expression $\frac{n}{8}$?
A. 8 times a number B. a number decreased by 8
C. a number divided by 8 D. 8 divided by a number 38. _____
39. Write a variable expression that corresponds to “the product of 10 and r .”
A. $10r$ B. $10 \div r$ C. $10 - r$ D. $10 + r$ 39. _____
40. A bakery bakes b bagels per day. Which variable expression represents the number of bagels baked in 6 days?
A. $6 + b$ B. $6b$ C. $b - 6$ D. $\frac{b}{6}$ 40. _____



Basic Skills Test, Form D (continued)**Skill 11: Solving One-Step Equations**

41. Solve $w - 6 = -2$.

A. -4

B. 4

C. 8

D. -8

41. _____

42. Solve $x + 3 = -6$.

A. -6

B. 9

C. -9

D. -6

42. _____

43. Solve $42 = -6t$.

A. -7

B. 8

C. -8

D. 7

43. _____

44. Solve $\frac{n}{-3} = -18$.

A. 6

B. 54

C. -54

D. -6

44. _____

