Name_____ Date_____ Block_____

Directions: Complete as much of this packet as you can!! Ignore how the problems are numbered. Work with a partner if you chose. You can do the packet in any order (except you can't work on the Sudoku until you've completed at least four of the other pages). The teacher will collect the packet before you leave. I will grade you on what you finished and this grade will go into Infinite Campus. You will NOT get a chance to improve this grade, so work hard and get as much of it done as possible and behave yourselves!!

-Mr. Sorensen

Square Root Packet

√ √ √ √ √

Name _____ Date _____ Class _____

Skill: Exponents and Square Roots

Investigation 2

Looking for Pythagoras

Find the value of each square root.

1. $\sqrt{64}$ **2.** $\sqrt{81}$ **3.** $\sqrt{100}$ **4.** $\sqrt{144}$

Find the length of the side of a square with the given area.

5. 121 ft^2 **6.** 4 mi^2

7. 225 $in.^2$ **8.** 196 yd^2

Find two consecutive whole numbers that each number is between.

9. $\sqrt{80}$ **10.** $\sqrt{56}$

11. $\sqrt{130}$ **12.** $\sqrt{150}$

13. $\sqrt{70}$ **14.** $\sqrt{190}$

15. $\sqrt{204}$ **16.** $\sqrt{159}$

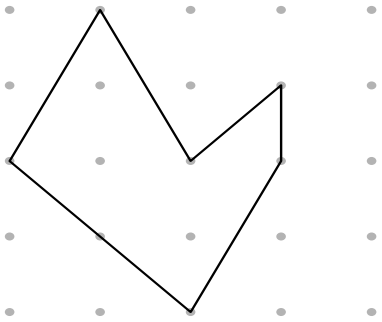
Estimate each square root to one decimal place.

17. $\sqrt{18}$ **18.** $\sqrt{24}$

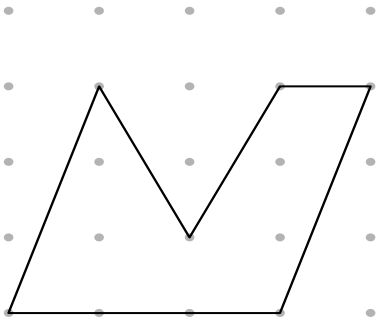
19. $\sqrt{50}$ **20.** $\sqrt{8}$

For Exercises 11–14, find the area of the figure. Explain our reasoning.

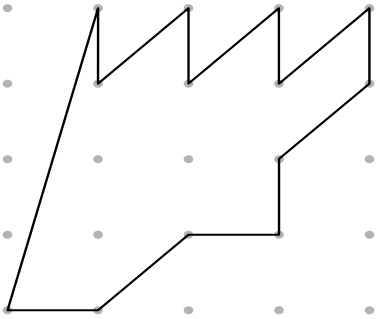
11.



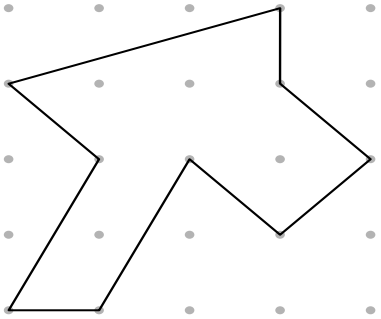
12.



13.



14.



Name the coordinates of each point in the graph.

1. J

2. R

3. K

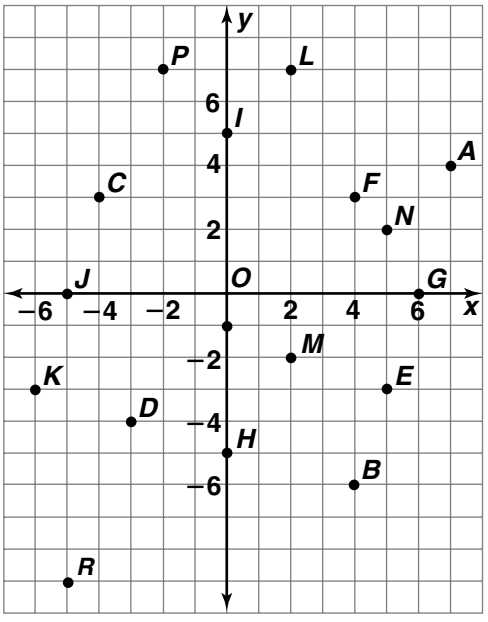
4. M

5. I

6. P

7. N

8. L



List all the whole numbers that could be substituted for x so that the expression is true.

a. $4 < \sqrt{x} < 5$

b. $8 < \sqrt{x} < 9$

c. $0 < \sqrt{x} < 1$

For each number sentence below, decide if it is true (T) or false (F):

a. $7 = \sqrt{49}$

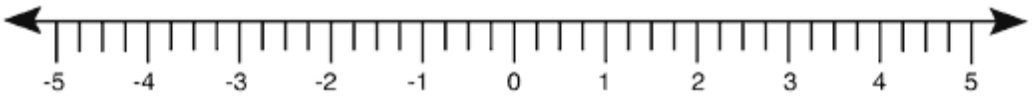
b. $7 = -\sqrt{49}$

c. $-7 = \sqrt{49}$

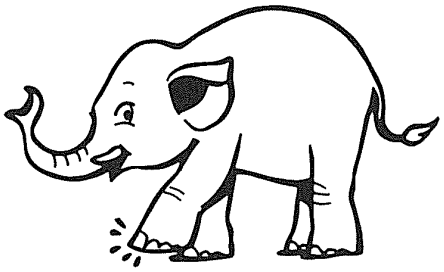
d. $-7 = -\sqrt{49}$

Put the following set of numbers in order on a number line.

2.3	$2\frac{1}{4}$	$\sqrt{5}$	$\sqrt{2}$	$\frac{5}{2}$	$\sqrt{4}$
4	-2.3	$-2\frac{1}{4}$	$\frac{4}{2}$	$-\frac{4}{2}$	2.09



Why Did the Elephant Paint His Toenails Red, Green, Yellow, Blue, and Purple?



Find each answer in the appropriate set of boxes at the bottom of the page.
Write the letter of the exercise in the box containing the answer.

I. Find the length of one side (***s***) of each square.

(O) Area $25\ m^2$ — s = _____ m

(I) Area $64\ cm^2$ — s = _____ cm

(E) Area $400\ ft^2$ — s = _____ ft

II. Find the square root.

(S) $\sqrt{49}$	(L) $\sqrt{16}$	(I) $\sqrt{100}$	(O) $\sqrt{81}$
(E) $\sqrt{36}$	(D) $\sqrt{4}$	(H) $\sqrt{144}$	(N) $\sqrt{1}$
(C) $\sqrt{900}$	(H) $\sqrt{2{,}500}$	(U) $\sqrt{6{,}400}$	(D) $\sqrt{10{,}000}$

III. Simplify.

(E) 15^2	(H) 11^2	(A) 25^2
(Y) $\sqrt{225}$	(E) $\sqrt{121}$	(L) $\sqrt{625}$
(A) $\sqrt{16} + \sqrt{9}$	(E) $\sqrt{36} + \sqrt{64}$	(R) $\sqrt{25} - \sqrt{9}$
(N) $\sqrt{16 + 9}$	(T) $\sqrt{36 + 64}$	(J) $\sqrt{25 - 9}$
(L) $\sqrt{0.25}$	(B) $\sqrt{0.81}$	(J) $\sqrt{0.01}$

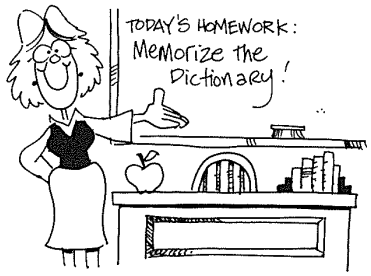
Answers for Part I and Part II

7	9	11	12	20	60	30	5	80	4	2	3	50	10	100	6	90	8	1

Answers for Part III

18	10	121	11	12	0.1	14	25	0.5	15	0.4	0.9	225	7	5	715	4	625	2

Why Did the Teacher Assign Extra Homework When She Taught Adolescents?



Find which two consecutive whole numbers the square root is between. Write the letter of the exercise on the number line between these two numbers.

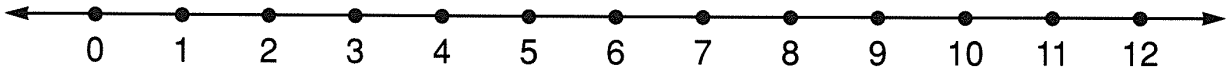
Use the top number line for the first set of exercises, and the bottom number line for the rest.

(S) $\sqrt{30}$ (H) $\sqrt{2}$ (T) $\sqrt{45}$

(E) $\sqrt{8}$ (A) $\sqrt{23}$ (N) $\sqrt{120}$

(G) $\sqrt{138}$ (I) $\sqrt{82}$ (W) $\sqrt{11}$

(Y) $\sqrt{70}$ (S) $\sqrt{0.5}$ (R) $\sqrt{59}$

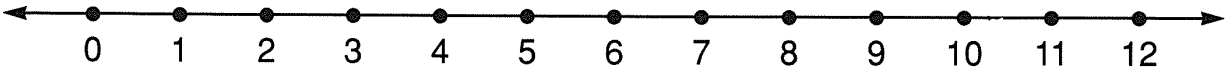


(S) $\sqrt{75}$ (D) $\sqrt{20}$ (O) $\sqrt{3}$

(A) $\sqrt{6}$ (E) $\sqrt{52}$ (S) $\sqrt{95}$

(O) $\sqrt{112}$ (N) $\sqrt{125}$ (D) $\sqrt{14}$

(T) $\sqrt{0.1}$ (A) $\sqrt{33}$ (L) $\sqrt{40}$



Why Does Mrs. Snuggle Call Her Sons' Ranch "SOLAR FOCUS"?

Simplify each expression below and find your answer in the corresponding set of answer boxes. Print the letter of that exercise in the box containing the answer.

(S) $\sqrt{49}$
(T) $\sqrt{1}$
(H) $\sqrt{100}$
(I) $\sqrt{900}$

(S) $-\sqrt{64}$
(E) $-\sqrt{225}$
(I) $-\sqrt{10{,}000}$
(T) $\sqrt{\frac{9}{16}}$

(O) $\sqrt{9^2}$
(E) $\sqrt{15^2}$
(R) $(\sqrt{11})^2$
(W) $(\sqrt{60})^2$

(E) $\sqrt{25} - \sqrt{16}$
(T) $\sqrt{25 - 16}$
(H) $\sqrt{36 + 64}$
(P) $\sqrt{36} + \sqrt{64}$

30	1	−12	−100	7	1000	$\frac{3}{4}$	10	−15	$\frac{2}{3}$	−8	14	9	3	12	60	10	15	11	1

(H) $\sqrt{10^2 - \sqrt{8^2}}$
(S) $\sqrt{10^2 - 8^2}$
(O) $\sqrt{10^2 - 6^2}$
(R) $\sqrt{13^2 - 12^2}$

(E) $\sqrt{400}$
(T) $-\sqrt{8100}$
(N) $-\sqrt{14{,}400}$
(S) $\sqrt{\frac{1}{9}}$

(E) $-\sqrt{\frac{81}{4}}$
(A) $\sqrt{0.25}$
(I) $-\sqrt{0.49}$
(E) $\sqrt{0.01}$

(A) $-\sqrt{1.44}$
(T) $\sqrt{0.0004}$
(S) $-\sqrt{0.0121}$
(M) $\left(\sqrt{\frac{2}{3}}\right)^2$

−90	2	20	−200	$\frac{1}{3}$	8	−120	6	14	5	−1.2	−0.7	−0.11	$-\frac{9}{2}$	−0.9	$\frac{2}{3}$	0.1	0.5	0.02

OBJECTIVE 3–b: To find the square roots of numbers and expressions that have rational square roots.

Directions: Fill in the 9×9 grid with digits so that each column, each row, and each of the nine 3×3 sub-grids contain all of the digits from 1 to 9.

You need to complete at least four of the other pages first before working on this puzzle!

Sudoku
Game 2

		5		7			4	
8			9		5	1		7
	2	7		8			6	
	1			2		5		4
4			3		7		9	
2	9				8			3
		9			2			
	4	2	1			8		9
3				9	4		5	6

http://math.about.com