Answer Key

June 10, 2016

Happy LAST FRIDAY OF THE SCHOOL YEAR!!!!!

I know you will be GREAT the sub. REMEMBER, YOUR UNIT TEST IS MONDAY!!!!!!! Names left may be excluded from the Spirit Trip and/or the dance. I know I don't have to worry because you are such a great class :)

Here is what I need you to do today: please do the all the ACE questions for Investigation 5. These are on page 88-102. The numbers are 1-46. You may work with a neighbor listen to music. Everyone needs to do their own work and you may use a calculator. I left the answers with the sub in case you want to check your work. When you are done, work on this Review Packet. Get as much done as you can. Take this home to study!

Thank you in advance for being so awesome! NO TEXTING, PICTURES, VIDEOS, SNAPCHAT OR INSTAGRAM. Remember, your behavior can impact your ability to go to the dance and/or the spirit trip. If you can do these problems, you will do GREAT on the test. Do your best!

Only one more week.....

What to study for the Math 8 Plus Unit Test:

- The Pythagorean Theorem!!!! $a^2 + b^2 = c^2$
- Connect points on a grid to make a figure (Inv. 1)
- Names and properties of four-sided figures (Inv. 1)
- Find the lengths of sides of figures WITHOUT using a ruler (Inv. 2)
- Finding square roots (Inv. 2)
- Finding cube roots (Inv. 2)
- Finding the area and perimeter of irregular figures (Inv. 1)
- Finding side lengths of triangles using 30-60-90 rules (Inv. 5)
- Converting fractions to decimals (Inv. 4)
- Classifying rational and irrational numbers (Inv. 4)
- Creating an equation to find the radius of a circle on a coordinate plane (Inv. 5)

Name _____ Date _____ Class _____

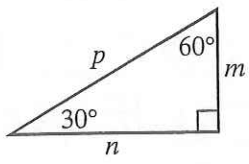
Skill: Special Right Triangles

Investigation 4

Looking for Pythagoras

The length of one side of the triangle is given in each row of the table. Find the missing lengths for that triangle.

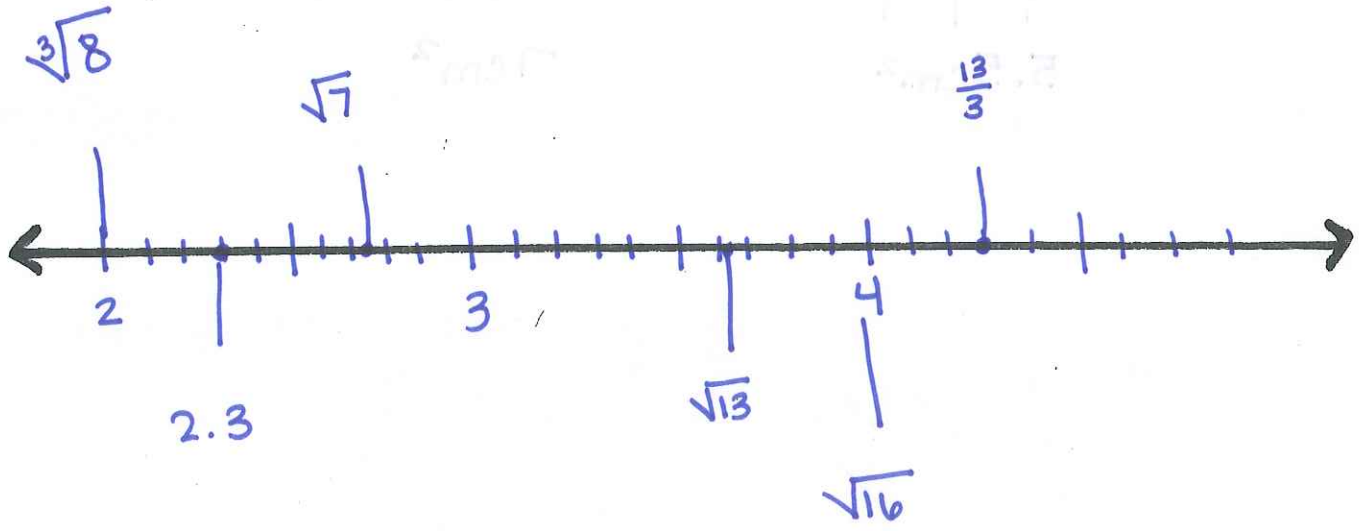
	m	*n*	*p*
1.	14	$14\sqrt{3}$	28
2.	18	$18\sqrt{3}$	36
3.	9	$9\sqrt{3}$	18
4.	5	$5\sqrt{3}$	10



Arrange the following on a number line:

$\frac{13}{3}$, $\sqrt{7}$, $\sqrt{16}$, $\sqrt{13}$, 2.3, $\sqrt[3]{8}$

$4.\overline{3}$ 2.6458 4 3.606 2



Find 2 perfect square numbers that add to give you the given sum.

Ex: 9 + 16 = 25

1. 1 + 9 = 10
2. 1 + 25 = 26
3. 4 + 25 = 29
4. 1 + 169 = 170

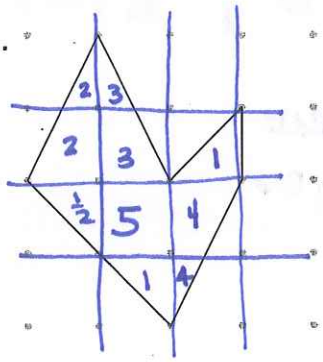
Name _____ Date _____ Class _____

Additional Practice *(continued)*

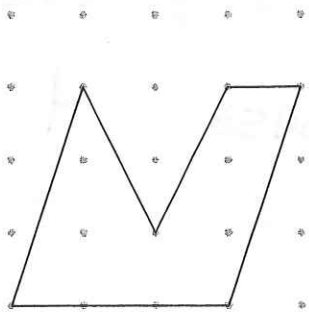
Investigation 1

Looking for Pythagoras

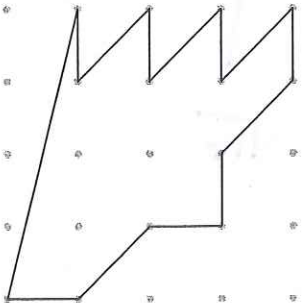
For Exercises 11–14, find the area of the figure. Explain our reasoning.

11. 

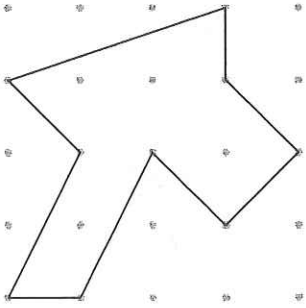
5.5cm²

12. 

7cm²

13. 

8.5cm²

14. 

7.5cm²

Name _____ Date _____ Class _____

Additional Practice *(continued)*

Investigation 2

Looking for Pythagoras

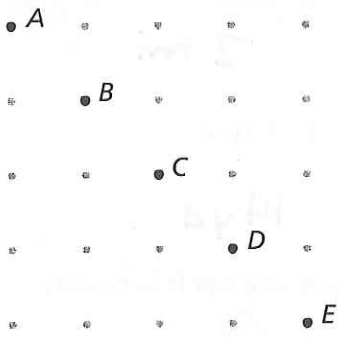
11. For each number sentence below, decide if it is true (T) or false (F):

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

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

SKIP

12. Points A, B, C, D, and E are shown on the grid below:



Using these 5 points only, list all line segments which have the following lengths:

$\sqrt{2}$ AB, BC, CD, DE

$2\sqrt{2}$ AC, BD, CE

$3\sqrt{2}$ AD, BE

$4\sqrt{2}$ AE

$5\sqrt{2}$ NONE

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

a. $4 < \sqrt{x} < 5$ 17 - 24

b. $8 < \sqrt{x} < 9$ 65 - 80

c. $0 < \sqrt{x} < 1$ none

Name _____ Date _____ Class _____

Skill: Exponents and Square Roots

Investigation 2

Looking for Pythagoras

Find the value of each square root.

1. $\sqrt{64}$ 8
2. $\sqrt{81}$ 9
3. $\sqrt{100}$ 10
4. $\sqrt{144}$ 12

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

5. 121 ft^2 11 ft
6. 4 mi^2 2 mi
7. 225 $in.^2$ 15 in
8. 196 yd^2 14 yd

Find two consecutive whole numbers that each number is between.

9. $\sqrt{80}$ 8 and 9
10. $\sqrt{56}$ 7 and 8
11. $\sqrt{130}$ 11 and 12 ~~12 and 14~~
12. $\sqrt{150}$ 12 and 13 ~~13 and 14~~
13. $\sqrt{70}$ 8 and 9
14. $\sqrt{190}$ 13 and 14
15. $\sqrt{204}$ 14 and 15
16. $\sqrt{159}$ 12 and 13

Estimate each square root to one decimal place.

17. $\sqrt{18}$ 4.2
18. $\sqrt{24}$ 4.9
19. $\sqrt{50}$ 7.1
20. $\sqrt{8}$ 2.8