Math 8CP Homework
February 26-28 - March 1

Name _____
Per _____ Date _____

Tuesday:
1) Graph both tables and write a rule.

x	-4	0	2
y	5	3	2

Rule_____

x	-2	2	-3
y	-2	-4	-1.5

Rule_____
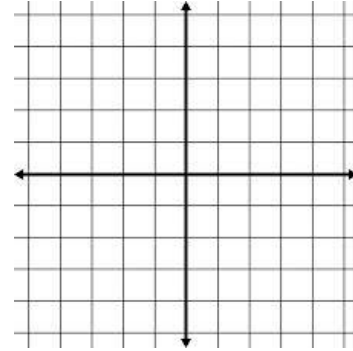
b. What is the solution and why?

2. *Evaluate* the following expressions:

a. $-\sqrt{\dfrac{3}{27}}$
b. $21-4\sqrt{81}$
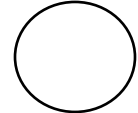c. $\left(\sqrt{45}\right)^2$
d. $\sqrt[3]{64}+5\sqrt[3]{27}$

3. Find the dimensions of the square or circle. Mark the side or radius on the diagrams:
Round to the nearest tenth, if necessary.
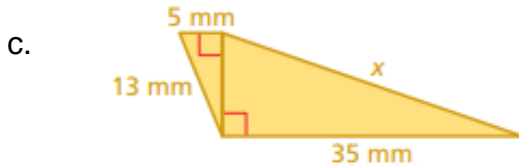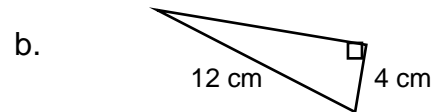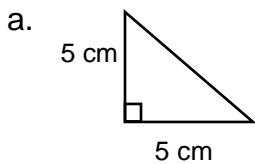
a. Area = 196 cm²
  side = _____
perimeter =_____

b. Area = 144π in²
  radius = _____
circumference =_____

4. Find the missing sides of the right triangles: *Round to the nearest tenth, if necessary.*

a.
5 cm
5 cm
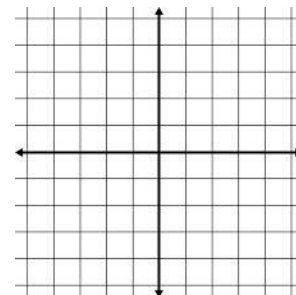
b.
12 cm
4 cm

c.
5 mm
13 mm
x
35 mm

Wednesday:
1) Find the slopes of the lines that pass through these points.
Use the graph to help!

a. (5, 4) and (-3, 4)

b. (-4, 2) and (0, -3)

c. (3, 6) and (-2, 7)

2. What is the side of a cube that has a volume of 125 cm³ ? Sketch the cube including its dimensions.

What is the surface area of this cube?

3. Write if the following systems of equations have 1 solution, no solution or infinitely many solutions by looking at the equations (DO NOT SOLVE!!):

a. $3x - 4y = 8$
   $6x - 8y = 16$

b. $3x + 5y = 23$
   $-3x - 5y = 12$

c. $5x + 8y = 12$
   $3x - 2y = 5$

4. Evaluate:

a. $\sqrt[3]{-216}$

b. $5\left(\sqrt[3]{27}\right)$

c. $\sqrt[3]{-\dfrac{1}{64}}$

d. $\sqrt{49} - \sqrt[3]{125} + \left(\sqrt{16}\right)^2$

Thursday:
1. Find the missing side lengths:

a.

20 yd   21 yd

b.

x 6.5 cm

5 cm
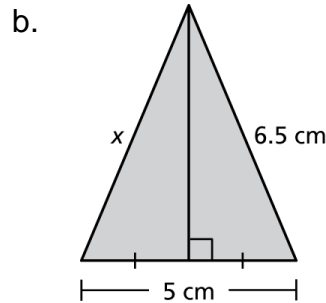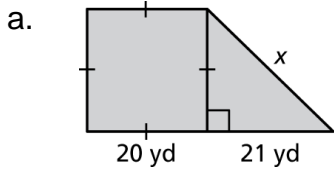
2. Find the rule (equation) of the following linear functions:

a.
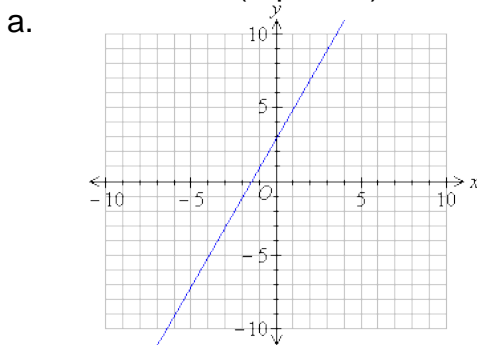
b. (3, 5) , (6, 8) , (-1, 1)

c.

x	y
-3	4
-1	3
1	2
3	1

3. Fill in the chart :

Original form	Factored form (repeated multiplication)	Simplified exponent form
$4^5 \bullet 4^4$		
$(3^2 x^3) \bullet (5 x^6)$		
$6 \bullet a^4 \bullet a^2 \bullet 3 \bullet x^3$		
$2x^4 \bullet 7x \bullet x^5$		

Thursday HW continues next page….

4. For both equations, isolate y and identify the slope and y-intercept:

a. $5x + y = 3.5$

b. $-3x + 4y = 8$

m = _____   b = _____   m = _____   b = _____

Friday:

1. The area of a circle is 81π cm^2. Find the radius.

2. A ladder that is 12 feet long is leaned against a wall. If bottom of the ladder is 4 feet away from the wall, how far up the wall will the ladder reach?
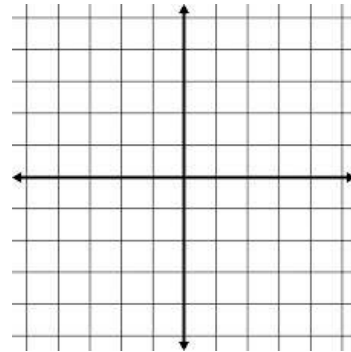Draw a sketch and answer the question rounded to the nearest tenth of a foot.

3. Find the equation of a line that passes through the point (4, –1) and has a slope of $\frac{1}{2}$
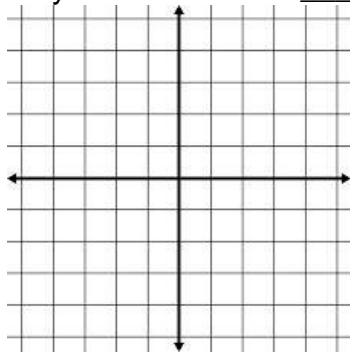
Use the table and graph to help find this equation.

a.

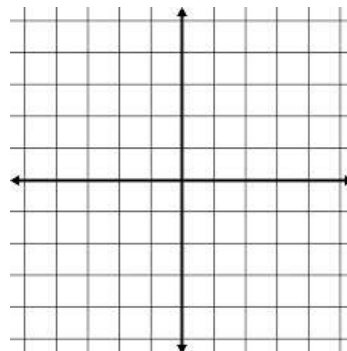| x	−2	0	2	4
y				

4. Graph the equation of both lines and write the slope (use Desmos to help if you aren't sure):
a. $y = 3$ m = _____

b. $x = -4$ m = _____

5. Your family has to buy a new air conditioning/heating unit for your house. The cost is $7,950.
Since you have a coupon, you get 10% off this price. After the discount, you have to add 8% tax.
What is the total cost?

Discount_____
Sale price_____
Tax_____
Total_____