Final Review 7th

<table>
<tr><td>

Vocabulary
1. Polygon
2. Benchmark angle
3. Factor
4. Proportion
    a. Proportional relationship
        i. Given a table
        ii. Given a graph
5. Unit rate
6. Diamerter
7. Radius
8. Circumference
9. Net

</td><td>

Formulas
1. Order of Operations
2. Perimeter
    a. Rectangles
3. Area
    a. Rectangles
    b. circles
4. Volume
    a. Rectangular prism
5. Surface Area
    a. Rectangular prism
    b. cylinder
6. Circumference
7. Slope

</td></tr>
</table>

Sample Problems

1. Identify 3 shapes that could be used to tile a flat surface without gaps or overlaps, explain why those shapes work.
2. Are the following always true, sometimes true or never true
   a. A positive number plus a positive number is a positive number
   b. A positive number minus a positive number is a positive number
   c. A negative number plus a positive number is a positive number
   d. A negative number minus a positive number is a positive number
3. Write a number sentence where the product is
   a. Less than 0
   b. Greater than 0
   c. Equal to 0
4. Write a number sentence where the quotient is
   a. Less than 0
   b. Greater than 0
   c. Equal to 0
5. Simplify: $3^2(4-5)+4^2-6$
6. Solve:
   a. $\frac{1}{3}+-2\frac{2}{5}$
   b. $3\frac{2}{3}-1\frac{1}{4}$
   c. $\frac{3}{5}\cdot\frac{7}{-8}$
   d. $3\frac{1}{6}\div-1\frac{3}{7}$
7. Jo is buying t-shirts for the school. 5 t-shirts cost $8.50. She needs to buy 300 t-shirts.
   a. Write two different proportions she could use to solve for the cost of 300 shirts.

      b. How much will she pay for 300 shirts?

      c. If the t-shirt company is having a 25% off sale how much will she pay?

      d. If she has a coupon for an additional (she gets the stores discount too) 10% off how much will she have to pay?

8. If 3 chocolates have 240 calories how many calories are in each chocolate?

9. If I can buy a 24 pack of soda for $6.99 or a 12 pack for $3.75. Which is the better deal?

10. A circle has a diameter of 20. Use 3.14 for π

      a. What is the radius of the circle?

      b. What is the circumference of the circle?

      c. What is the area of the circle?

11. I can drive 365 miles on a 12 gallon tank of gas. What is the unit rate for miles per gallon?

12. Write and solve a number sentence for the following situations, use negatives when appropriate.

      a. Yesterday the temperature was 8 degrees below zero then it rose 30 degrees. What is the temperature now?

      b. Yesterday the temperature was 8 degrees below zero then it rose to +30 degrees. How many degrees did the temperature rise?

      c. The temperature dropped 0.8 degrees every day for 12 days. How much did the temperature drop over the course of the 12 days?

13. Draw a polygon. Draw a shape that is NOT a polygon.

14. Use benchmark angles to estimate the angle measure of the following angles.

90°

45°

135°

15°

270°
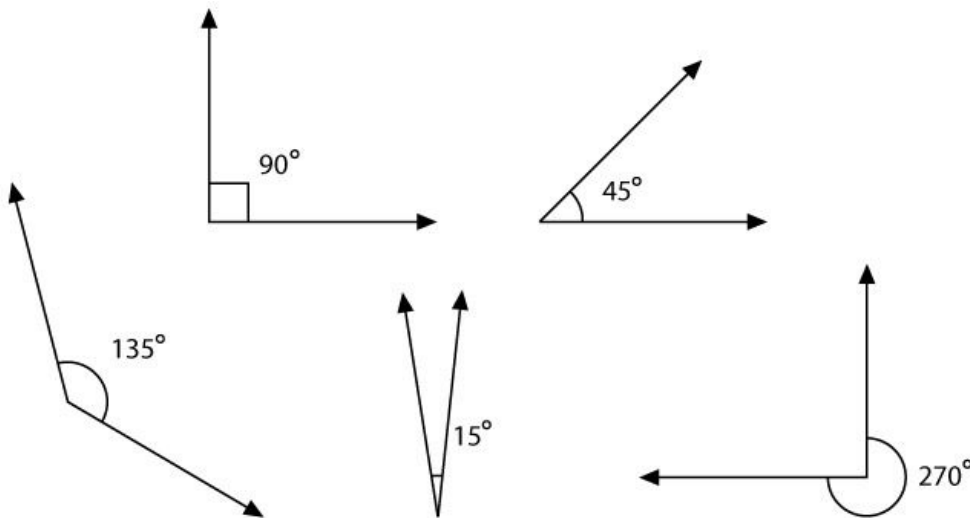
15. How tall is the taller tree?

10.5 ft

17.5 ft

11.25 ft
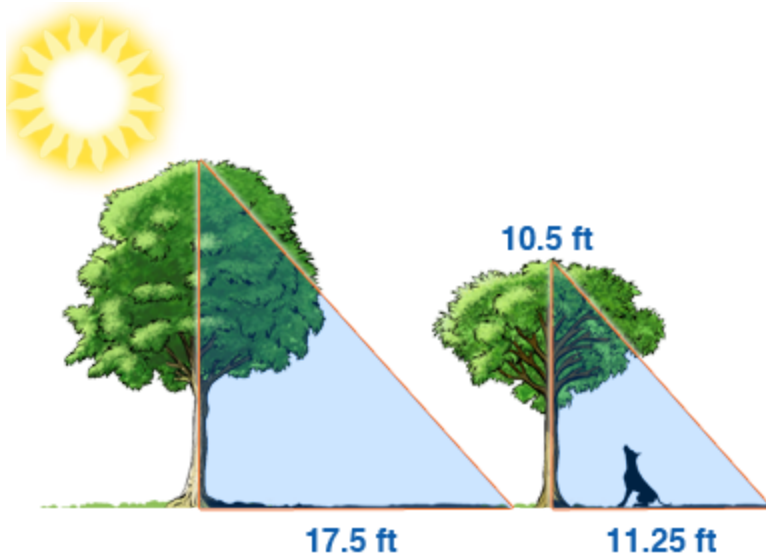
16.

Determine if the values in the table are proportional (yes) or not (no).

1)

X	Y
-4	-5
-3	-6
-2	-7
-1	-8

2)

X	Y
6	-2
7	-1
8	0
9	1

3)

X	Y
-70	-10
-56	-8
-14	-2
-7	-1

17. What is the volume AND of the shapes below.

r = 3 in

h = 10

10 cm

4 cm

⊢5 cm⊣
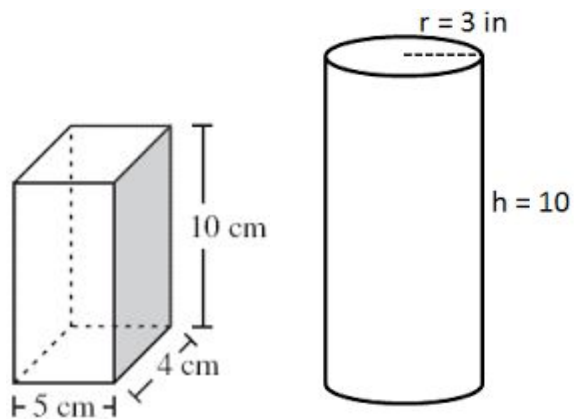
18. Match the graph to the table and equation that are the same.

x	y
-2	-9
-1	-7
0	-5
1	-3
2	-1

x	y
-2	8
-1	5
0	2
1	-1
2	-4

x	y
-2	8
-1	7
0	6
1	5
2	4

$y = -x + 6$
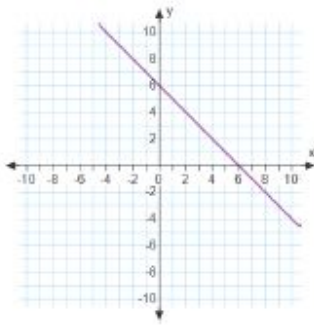
$y = -3x + 2$

$y = 2x - 5$

19. Identify the slope and y-intercept of both of the lines. Write the equation of each of the lines.
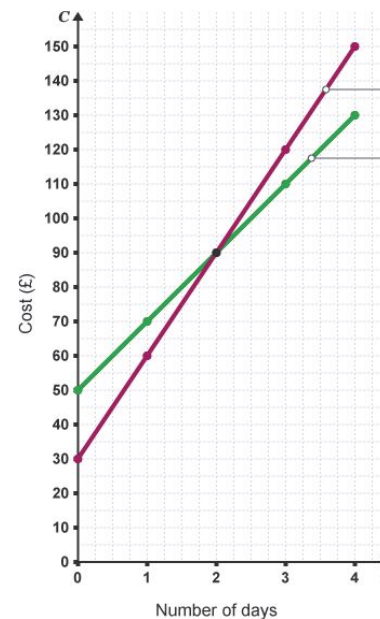
20. Order the following from least to greatest.

$0.123, \; -1.5, \; 2.4, \; 2\frac{1}{4}, \; 2.02, \; -1\frac{2}{3}, \; 0.24, \; \frac{1}{4}$