7th Grade 20 Day Homework Day 1

1) Two hundred and twenty people applied to work at Ernest Educational Concepts. After Ms. Ernest reviewed their applications, one-fourth of the people could not pass the math test and one-eighth of the people were late to the interview. What percent of applicants either could not pass the math test or were late to the interview?

2) The White House has a collection of 50,000 pieces of art and décor. In October, the Smithsonian American Art Museum displayed 95 of those pieces. What percent of the White House collection was displayed at the Smithsonian?

3) A regular heptagon has side lengths of \( \frac{3}{4} \) feet. What is the perimeter of the heptagon in inches?

4) A cylindrical vase has a diameter of 6 inches. Liz filled the vase with \( \frac{1}{2} \) a foot of water. If the height of the vase was 13 inches, how many cubic inches of air is left in the vase?

5) South Korean teenagers Ha Mok-min and Bae Yeong-ho are the first Mobile Worldcup champions who set a record of texting 356,974 key strokes per minute. How many key strokes per second did they use to the nearest stroke?

6) Fifty-two percent of readers polled indicated that “A New Year means it is time for a new hairstyle.” What fraction of these readers did not agree?

7) Write the first three terms of a sequence for \((n + 2)^2 - 3n\):

8) If \((2, 2)\) is translated 3 units to the right and 2 units up, what are the new coordinates?

9) The model represents the equation \(3x + 3 = 3y + 3\). What is the value of \(x\)?

10) Name the following triangle according to its angles and sides: 50°, 65°, and 65°
7th Grade 20 Day Homework Day 2

1) Mr. Lazaro has an acre of land and plans to use \( \frac{3}{4} \) of it for a vegetable garden. If he plants tomatoes in half of the garden, how much of his land will be left to use for something else?

2) Limestone must be heated to 2600 degrees Fahrenheit, but magnesium oxide can be prepared for cement at 1,300 degrees Fahrenheit. What is the percent difference between the two?

3) Find the radius of a circle whose circumference is 37.052 cm.

4) A cylindrical mug has a height of 9.2 cm and a diameter of 8 cm. What is the area of the base of the mug?

5) A blueprint has a scale of 1/8 in = 1 foot. The drawing shows the width of a window to be \( \frac{3}{4} \) inches wide. What is the actual width of the window?

6) Thirty-four percent of readers polled said that they make a point to read their horoscope for the New Year. When asked if they believed their horoscope:
   - 63% of them said "No, but it’s still fun to read."
   - 36% of them said "I believe some of it."
   - 1% of them said "I believe all of it."
   What fraction of the people believed at least some of their horoscope?

7) What quadrant does the order pair (-1, 5) lie in?

8) Write an equation that describes the following: Karis charges $11.75 per hour for babysitting which came to a total of $70.50.

9) Which quadrilateral has two pairs of parallel sides and four lines of symmetry?
   Trapezoid, square, rhombus

10) Draw the model for \( 3^2 \)
1) We spend approximately a third of our life sleeping. Approximately how many years of sleep would that be for someone who is 41 years old?

2) Roberto has $35.62 to spend. The video store charges $4.95 per video plus 8.125% tax. How many videos can he rent?

3) Stan’s kitchen floor measures 22 feet by 16 feet. He plans on laying tile down and each tile piece measures 16 inches by 16 inches. How many tiles does he need to buy?

4) A rectangular toolbox has a length of 1 2/3 ft, a width of 6 inches, and a height of 7 1/8 inches. What is the volume of the toolbox rounded to the nearest tenth of an inch?

5) Javier has a rectangular beach blanket which measures 5 1/4 by 3 1/2 feet long. He has a second blanket which is similar and has a width of 31 1/2 feet. What is the length of the second blanket?

6) 6 ÷ 2 - 18 ÷ 3

7) If Point W (5.6, 2.9) is reflected over the y-axis, what will its new coordinate be?

8) Model .3(.6)

9) Which of the following measures would show the variation in data: mean, median, mode, range

10) Which of the following has two parallel bases that are not polygons? cone, prism, pyramid, cylinder
1) Ms. Palacios is making mini cakes. Each cake needs 1/5 teaspoon of confetti candy. If she has 15 1/8 teaspoons of confetti candy, how many whole mini cakes can she decorate?

2) Jim is going to purchase a DVD player for $179.95 plus 8.25% sales tax. If he spreads his payments out over 12 months, what will his monthly payment be?

3) A rectangular swimming pool has a base length of 48 inches, a width of 13.5 feet and a height of 4.5 feet. How many feet of railing was used around the perimeter of the pool?

4) A rectangular aquarium fish tank is 10.2 meters long, 5.8 meters wide, and 3.5 meters deep. What is B?

5) Richard James invented the Slinky in 1943. If one Slinky is produced every eight seconds, how many Slinkys are made in one day?

6) Create a list showing the sample space for the following scenario: You can choose between a turkey, ham, or tuna sandwich and then between apple or orange juice.

7) Write an equation for the following scenario. Patricia’s snack cost $8.98. After she paid for it, the cashier gave her $11.02 back. What is $x$, the amount of money she gave the cashier?

8) Triangle ABC has vertices A (h,k), B (i,j), C (m,n). What will the new coordinates be of point B if the triangle is translated 7 units to the left and 4 units down?

9) Model 2.0 ÷ .1

10) Find the complement and supplement of an angle which has a measure of 150 degrees.


1) During the last four days, Manuel studied for 3 hours, 2 1/2 hours, 1 1/2 hours, and 3 hours. What was his median studying time?

2) In a class of 40 students, 25% had brown hair. Of the remaining students, 30% of them had blonde hair. How many students had blonde hair?

3) Which of the following is not related to linear measure: perimeter, circumference, area, volume

4) The triangular base of a prism is a right triangle with sides of 3 in, 4 in and 5 in. The height of the prism is 1 1/4 ft. What is the volume of the prism in cubic inches?

5) A magazine asked readers which songs keep them motivated when they are ready to go to the gym:
   - 9/50 of them said Lady Gaga’s “Born This Way”
   - 12/25 of them said The Black Eyed Peas “I Gotta Feeling”
   - 17% of them said Bon Jovi’s “It’s My Life”
   - .26 of them said Kathy Perry’s “Fireworks”
   - .15 of them said Kanye West’s “Stronger”

List these answers from least to greatest.

6) Wendell was taking a trip from Ernestville to Kerrville and he measured the distance on the map and found it to be 6 inches. The scale on the map says that 1/2 inch = 15 miles. What is the actual distance between the two cities?

7) The equation 4x + 2 = x + 8 is modeled below.

   \[ \begin{array}{ccccccc}
   x & x & x & x & 0 & 0 & x \\
   \end{array} \] = \[ \begin{array}{cccccccc}
   0 & 0 & 0 & 0 & 0 & 0 & 0 & 0 \\
   \end{array} \]

What is the value of \( x \) that makes the equation true?

8) For the set \{1, 12, 1, 8, 2, 7, 4, 6, 5\}, which would not be affected if another value of 1 was included? mean, median, mode, range

9) Name the following triangle according to its angles and sides: 45°, 90°, and 45°

10) Which quadrant is (-2, -9) in?