MATH 6 FALL 2018 CUMULATIVE PRACTICE QUIZ DECEMBER 20, 2018

Please show **all** your work! Answers without supporting work will not be given credit. Write answers in spaces provided. This quiz is out of 40 points.

Name:_____

1. Calculation. Make sure to simplify your answers when you can.(6×1 points)

   (a) $\sqrt{16} =$

   (b) $10^3 =$

   (c) $\frac{5}{6} - \frac{1}{3} =$

   (d) $(-4) - 8 =$

   (e) $2 + (-16) =$

   (f) $\frac{1}{2} \times 10 =$

2. Circle the bigger number. (4×1 points)

   (a) 5% or 0.2

   (b) $\frac{1}{2}$ or $1 : 3$

   (c) 0.5% or 0.02

   (d) $\frac{5}{6}$ or $\frac{6}{7}$

3. Solve for the unknow. Format your answers such that they are presentable. If applicable, report the answers in simplified fractions instead of decimals. (4×2 points)

   (a) $15x = -9x + 48$

   Answer:_____

   (b) $20x - 5 = 195$

   Answer:_____

   (c) $6x + 8x = 15x - 1$

   Answer:_____

   (d) $455x = 123 - x$

   Answer:_____

4. Most electricity is generated using hydro power plants in British Columbia, while that in Ontario is generated using nuclear reactors. One of the largest dams in BC is the GM Shrum station, which outputs power at about 2700 MW. Assume that a typical reactor in a nuclear power plant outputs power at about 750 MW, answer the following questions. (6 points total)

   (a) What is the ratio of the power output of the GM Shrum station to that of a nuclear reactor? (3 points)

   Answer:_____

   (b) How many nuclear reactors are needed to produce the same amount of electricity as the GM Shrum dam? (3 points)

   Answer:_____

5. A car drives from Surrey to Harrison Hot Springs, which is about 110 km away. The speed of the car is 55 km/h. Answer the following the questions. (6 points total)

   (a) How long does it take for the car to complete the trip? (3 points)

   Answer:_____

   (b) On the graphing paper, plot the car's distance from Harrison Hot Springs vs. time. (2 points)

   (c) Use your result in part b) to estimate the time it takes for the car to travel to 50 km away from Harrison Hot Springs. (1 point)

   Answer:_____

Cont.

6. Calvin and Chase are having a sandwich-eating contest. Calvin eats 1 sandwich per minute, and Chase eats 1 sandwich every two minutes (6 points total).

   (a) Write down the expression of the total number of sandwiches eaten, N, as a function of time, t. (3 points)

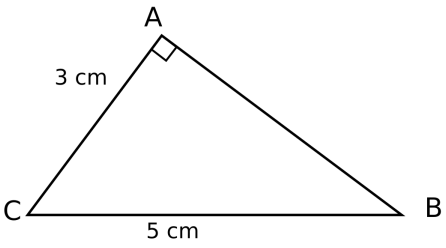
   Answer:_____

   (b) How many sandwich will they eat in 5 minutes? (3 points)

   Answer:_____

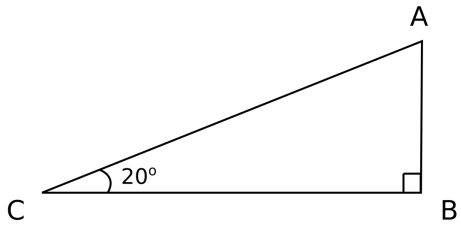
7. Find the missing dimension of the rectangles. (2×2 points)

   (a) Find the missing side.



   Answer:_____

   (b) Find the missing angle.



   Answer:_____

The End.