Warmup13

1. _____ 20% of 30% of 40% of what number is 9?

2. _____ min It takes 2 hours for Hiro to complete a job that takes Margaret 80 minutes to complete. How many minutes will it take for Hiro and Margaret to complete the job if they work together?

3. __(___,___)__ Triangle ABC is graphed on the coordinate plane with coordinates A(-1, 2), B(7, 6) and C(5, -2). Express the x-intercept of the altitude of the triangle drawn through point B as a coordinate pair.

4. _____ A set of five coins is flipped. If at least one of the coins land on heads, what is the probability that at least three of the coins land on heads?

5. _____ A rectangular sheet of paper is folded into thirds, and the resulting rectangle is similar to the original sheet of paper. If the original sheet of paper is 9in tall, what is its width? Express your answer in simplest radical form.

9in

6. _____ The mean of a set of nine test scores is 96. How many scores of 100 must be added to the set to increase the mean by 1 point?

7. _____ The balance in Steve's bank account is less than $100. The dollar value to the left of the decimal point in his account balance is five less than the cents value to the right of the decimal point. If he reverses the number of dollars and the number of cents, what will be the total increase in his account balance?

8. _____ Mark, Nina, Omar play each other in table tennis. After each game, the winner stays at the table and plays the person who was watching. One afternoon, they play a total of 15 games. Mark wins 7 games, while Nina and Omar each win 4. How many of the 15 games does Mark lose?

9. _____ How many times does the digit three appear in the integers between 100 and 999? For example, there are 16 threes from 300 to 313: 3̲00, 3̲01, 3̲02, 3̲03̲, 3̲04, 3̲05, 3̲06, 3̲07, 3̲08, 3̲09, 3̲10, 3̲11, 3̲12, 3̲13̲.

10. _____   What is the side length of the largest equilateral triangle which can be inscribed within a square of side length 6cm? Express your answer in simplest radical form.

6cm