Algebra SKILLS #25

Focus: Probability (Round 2)

Name:_____

Date:_____

You should be able to do all of these problems correctly. Apply yourself to do your best and **show your work, no calculators.**

1. **a.** What is the probability of getting a sum of 5 when you roll two six-sided dice?

b. What is the probability of getting a sum greater than 9 when you roll two six-sided dice?

2. Mr. Stiles is out to eat with his family. He has an option of 5 different drinks (soda, coffee, tea, water, juice), 2 main courses (chicken, steak), and 3 sides (rice, green beans, and potato). How many different combinations of 1 drink, 1 main course, and 1 side are possible?

3. A bag contains several marbles. Some are red, some are white, and some are blue. You count the marbles and find the theoretical probability of choosing a red marble is $\frac{1}{5}$ and the theoretical probability of choosing a white marble is $\frac{3}{10}$.

a. What is the least possible amount of marbles in the bag?

b. Can the bag contain 75 marbles? If so, how many of each color does it contain? If not, why not?

c. If the bag contains 24 red marbles and 36 white marbles, how many blue marbles does it contain?

4. In a standard deck of 52 shuffled cards:

a. What is the probability of drawing a red Queen, then drawing any black card?

b. What is the probability of drawing four aces in a row?

5. Find the Greatest Common Factor and Least Common Multiple of the following values:

225 & 90

6. Find the quotient. Round your answer to the nearest hundredth if necessary:

$625 \div {}^{-}0.25 =$

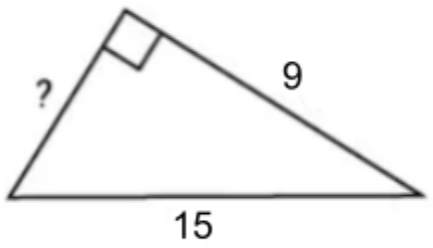
7. Solve:

${}^{-}64 \div 2^3 + {}^{-}13 \bullet {}^{-}5 - 27 =$

8. Find the difference. Express your answer in simplest form.

$14\frac{2}{3} - {}^{-}7\frac{7}{10}$

9. Find the missing length:



10. Find the quotient. Express your answer in simplest form.

${}^{-}2\frac{5}{8} \div 1\frac{3}{32}$