

SUPERSTARS III

Pluto, III

Name: _____

(This shows my own thinking.)

★★1. If $A \Delta B = A^2 + 2AB + B^2$, evaluate $4 \Delta 5$.

Answer: _____

★2. Express 2.7 as a common fraction.

Answer: _____

★★3. In a factory, a machine can fill 180 jars in 15 minutes. How many jars can be filled in 100 minutes?

Answer: _____ jars



★★4. What is the mode of this list of 16 numbers? Answer: _____

2 4 7 8 2 10 7 2 5 3 6 8 5 1 0 1

★5. If I dig a hole 4 meters square and 2 meters deep, how much dirt is in the hole?



Answer: _____ cubic meters

★★6. Sherry was playing a card game with her friends. She needed to draw a diamond greater than 10 to win the game. If she draws from a full standard deck of cards, what is the probability of her winning?

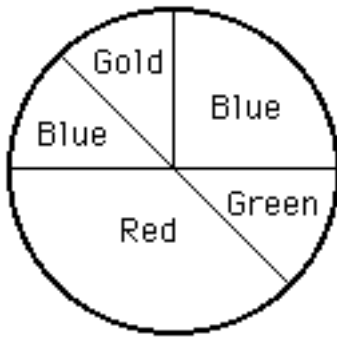
Answer: _____

★★★7. Replace R, M, and S with numerals to make a true equation.

$$\begin{array}{r} R R M \\ + \underline{S M} \\ \hline S M M M \end{array}$$

Answer: **R** = __, **M** = __, **S** = ____

★★★★8. Study the dart board below. Find the probability of hitting each color when a dart is thrown. Write the answer as a fraction in lowest terms.



Answer: Gold _____
 Green _____
 Red _____
 Blue _____
 Blue or Gold _____
 Orange _____

★★★★ 9. There are fewer than 6 *dozen* Blow Pops in my bag. If I count them by 2's, there is 1 left over. If I count them by 3's, there are 2 left over. There are 3 left over if I count by 4's. Four are left if I count by 5's. How many Blow Pops are in my bag?

Answer: _____ blow pops

★★★★10. A bat ate 208 bugs in 4 days. Each day she ate 20 more than the previous day. How many bugs did she eat each day?



Answer: day 1: ____ bugs; day 2: ____ bugs; day 3: ____ bugs; day 4: ____ bugs