

# Warm-Up SD

1. \_\_\_\_\_ Ricardo has apples, oranges, and peaches in the ratio 2:3:7, with a total of 144 fruits. If he eats two of each fruit, the ratio of apples to oranges to peaches will be  $a:o:p$  where  $GCF(a,o,p) = 1$ . Find  $a+o+p$ .



2. \_\_\_\_\_ What is the smallest prime greater than 200?

3. \_\_\_\_\_ mph Spongebob leaves his house everyday at 8:00am on the back of an ice cream truck. When the truck goes 40 mph he gets to the Krusty Krab 3 minutes late but when it goes 60mph he gets there 3 minutes early. What speed should the truck go so that Spongebob can get to work exactly on time?

4. \_\_\_\_\_ Cotton's Shirts has a \$50 set-up fee and charges \$9 per shirt. Nylon's Shirts charges \$14 a shirt with no set up fee. What is the smallest number of shirts that can be ordered from Cotton's Shirts for less than the cost of ordering from Nylon's Shirts?



5. \_\_\_\_\_ Patrick randomly selects two letters from the word CAMP, three letters from the word GLOW and four letters from the word HERBS. What is the probability that the letters he selects can be used to spell the word PROBLEM. Express your answer as a common fraction in simplest form.

6. \_\_\_\_\_ For what value of  $y$  are the points  $(7,-1)$ ,  $(3,-4)$ , and  $(-6,y)$  collinear. Express your answer as a decimal rounded to the nearest hundredth.

7. \_\_\_\_\_ If  $(x^3)^2 = \frac{1}{64}$ , what is  $2x$ ?

8. \_\_\_\_\_ What is the sum of positive numbers  $x$  and  $y$  if the product of  $x$  and  $y$  is 84, and the sum of their squares is 193?

9. \_\_\_\_\_ A pool is being filled with water for the summer. The pool is already  $\frac{1}{7}$  full. After 240,000 gallons of water are added, the pool is  $\frac{4}{7}$  full. How many gallons of water will the pool hold without overflowing?



10. \_\_\_\_\_ For how many ordered triples of primes  $(a, b, c)$  is  $a + b + c = 24$ ?