

Quiz 5A, MTH 2010 - No Calculators

Dr. Graham-Squire, Spring 2017

Name: _____

Key

1. (3 points) An Arnold Palmer is a drink made by mixing iced tea and lemonade in a ratio of 5 parts iced tea to 2 parts lemonade. If you wanted to make 140 cups of Arnold Palmer, how much iced tea and how much lemonade would you need? Be sure to specify which amount is lemonade and which is iced tea. A ratio table may help you, but is not necessary.

Ratio table:

Iced T.	5	$\xrightarrow{\times 20}$	100
Lemon.	2	$\xrightarrow{\times 20}$	40
A.P.	7	$\xrightarrow{\times 20}$	140

100 cups of I.T.
40 cups of Lemonade

2. (2 points) Billy has 90 square tiles, and he wants to make a rectangle by using all of his tiles. Write out all of the different possible side lengths of rectangles that he could make with all of those tiles.

Factors of 90 = 1, 2, 3, 5, 6, 9, 10, 15, 18, 30, 45, 90

$$1 \times 90$$

$$2 \times 45$$

$$3 \times 30$$

$$5 \times 18$$

$$6 \times 15$$

$$9 \times 10$$

3. (2 points) If you can rent 4 puppies for 4 hours for \$400, how much should it cost to rent 1 puppy for only 1 hour? Explain your reasoning.

4 puppies for 4 hours for $\$400$
 $\Rightarrow \downarrow \div 4$ 1 puppy for 4 hours for $\$100$
 $\Rightarrow \downarrow \div 4$ 1 puppy for 1 hour for $\boxed{\$25}$

4. (3 points) The ratio of adults to children on a bus was 4 to 1. When 15 adults got off at the next stop and no one else got on, the ratio of adults to children became 5 to 2. Which of the following equations could be used to find c , the number of children on the bus?

(A) $\frac{4c - 15}{c} = \frac{5}{2}$

(B) $\frac{\frac{1}{4}c - 15}{c} = \frac{5}{2}$

(C) $\frac{c}{4c - 15} = \frac{5}{2}$

(D) $\frac{c}{\frac{1}{4}c - 15} = \frac{5}{2}$

Original ratio was $4:1$

~~Then 15 adults~~ So if children = c ,

Then original #s are $4c : c$.

After 15 adults leave, now

ratio is $4c - 15 : c$, which

is $5 : 2$

$$\Rightarrow \frac{4c - 15}{c} = \frac{5}{2}$$