

## Investigations 1 and 2 Comparing Bits - STUDY GUIDE

1. Katie said, "The ratio of people to pets in my family is 2 to 1. For every two people we have one pet." If her family has three pets, how many people are in the family?

$$\frac{2 \text{ people}}{1 \text{ pet}} = \frac{6 \text{ people}}{3 \text{ pets}}$$

$\xrightarrow{\times 3}$

2. The diagram represents  $\frac{1}{5}$  of a fifths fraction strip. Sketch the whole strip.

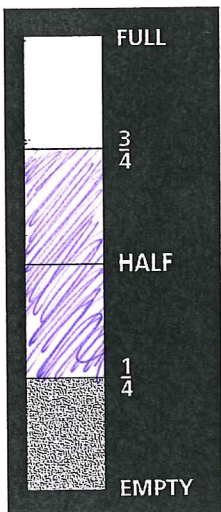


3. West Middle School ordered 121 boxes of markers. If there are 22 teachers, how many boxes does each teacher get?

$$\frac{121 \text{ boxes}}{22 \text{ teachers}} = \frac{5.5 \text{ boxes}}{1 \text{ teacher}}$$

$\div 22$

4. Trey's car has a 20-gallon fuel tank. The fuel gauge points to  $\frac{1}{4}$ . If Trey buys 10 gallons of gas, what will be the new reading on the gas gauge? Show your work.



$$\begin{array}{l} 5 \text{ gal} \\ + \\ 5 \text{ gal} \\ \hline 10 \text{ gal} \end{array}$$

New reading will be  $\frac{3}{4}$  tank.

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Express each phrase as a rate and unit rate.

- |                                 | Rate                             | Unit Rate                             |
|---------------------------------|----------------------------------|---------------------------------------|
| 5. 15 inches of snow in 3 hours | $15 \text{ in} : 3 \text{ h}$    | $5 \text{ in per hour}$               |
| 6. \$8.00 for 4 cans of tuna    | $\$8.00 : 4 \text{ cans}$        | $\$2.00 \text{ per can}$              |
| 7. 48 pencils for \$16.00       | $48 \text{ pencils} : \$16.00$   | $3 \text{ pencils per } \$1$          |
| 8. 90 miles on 6 gallons of gas | $90 \text{ mi} : 6 \text{ gal.}$ | $15 \text{ mp gallon}$<br>(miles per) |

9. You can buy 5 cans for green beans at the Village Market for \$4.00. You can buy 10 of the same cans of beans at Sam's Club for \$4.90. Which place is the better buy?

$$\frac{\$4.00}{5 \text{ cans}} = \frac{\$0.80}{1 \text{ can}}$$

$\div 5$

$$\frac{\$4.90}{10 \text{ cans}} = \frac{\$0.49}{1 \text{ can}}$$

$\div 10$

Better Buy

10. Complete the Ratio Table

30	16	24	60	1
45	24	36	90	$\frac{3}{2}$

$$\frac{24}{36} = \frac{2 \div 2}{3 \div 2} = \frac{1}{\frac{3}{2}}$$

11. Find the GCF (greatest common factor) of 12 and 30.

12	1, 2, 3, 4, (6), 12
30	1, 2, 3, 5, (6), 10, 15, 30

12. Find the LCM (least common multiple) of 9 and 6.

9	9, (18), 27, 36
6	6, 12, (18), 24

13. Change  $\frac{17}{2}$  to a Proper Fraction (Mixed number).

$$\frac{17}{2} = 8 \frac{1}{2}$$