

Key

# Chapter 1 Test Study Guide

Read each question. Then fill in the correct answer on the answer sheet provided by your teacher or on a sheet of paper.

1. The ratio of cats to dogs seen by a veterinarian in one day is 2 to 5. If a vet saw 40 dogs in one day, how many cats did he see?

$$\begin{array}{l} \text{Cats} \quad 2 \times 8 \\ \text{dogs} \quad 5 \quad 40 \end{array}$$

16 cats

2. At a sports camp, there is one counselor for every 12 campers. If there are 156 campers attending the camp, how many counselors will there be for 156 campers?

Campers	Counselors
12	1
24	2
156	■

$$\begin{array}{r} 12 \overline{)156} \\ \underline{-12} \phantom{0} \\ 36 \\ \underline{-36} \\ 0 \end{array}$$

13 counselors

3. A car jack requires a force of 110 pounds to lift a 2,500-pound car. (In simplest form, what is the ratio of the car's weight to the force required to lift the car?)

$$\frac{\text{weight}}{\text{force}} = \frac{2500}{110} = \frac{250 \text{ pounds}}{11 \text{ pounds of force}}$$

4. John Baker is making a cake for the school dance. The recipe calls for 2 cups of sugar for every 3 cups of flour. How many cups of flour are needed, if she is using 18 cups of sugar?

$$\frac{\text{sugar}}{\text{flour}} = \frac{2}{3} = \frac{18}{\square}$$

27 cups of flour

5. Which rate gives the best price for scrapbook paper?

Sale A: 10 sheets for \$2.00
Sale B: 6 sheets for \$3.00

Sale A

$$\frac{10 \text{ sheets}}{\$2}$$

$$\text{Unit Price } \frac{5 \text{ sheets}}{\$1}$$

Sale B

$$\frac{6 \text{ sheets}}{\$3}$$

$$\frac{2 \text{ sheets}}{\$1}$$

6. Which of the following ratios is equivalent to  $\frac{5}{7}$ ?

A.  $\frac{10}{12}$

C.  $\frac{15}{17}$

B.  $\frac{3}{5}$

D.  $\frac{10}{14}$

$$\frac{5}{7} = \frac{5 \cdot 2}{7 \cdot 2} = \frac{10}{14}$$

7. The table shows the cups of whole wheat flour required to make dog biscuits.

Number of Dog Biscuits	10	5	35
Cups of Whole Wheat Flour	2	1	■

7 cups

How many cups of whole wheat flour are required to make 35 biscuits?

8. Find the GCF of 30 and 48

6 = GCF

$$30 - 1, 2, 3, 5, 6, 10, 15, 30$$

$$48 - 1, 2, 3, 4, 6, 8, 12, 16, 24, 48$$

9. There are 12 boys and 15 girls in your class. Four new students, 3 boys and 1 girl, join your class. Will the ratio of boys to girls after the students are added be equivalent to the original group? Why or why not?

Original group  $\frac{12 \text{ boys}}{15 \text{ girls}}$  or  $\frac{4}{5}$   
 New group  $\frac{15 \text{ boys}}{16 \text{ girls}}$

\*NO These ratios are not equal.  $\frac{4}{5}$  does not equal  $\frac{15}{16}$

10. The table shows the cost of different kinds of fruit.

Fruit	banana	apple	orange	grapes
Cost per pound (\$)	0.60	1.89	0.99	1.00

To the nearest cent, what is the cost of 5 pounds of grapes?

$\frac{\$1}{1 \text{ lb}} = \frac{\$5}{\square}$   
 (x5)  
 5 pounds of grapes

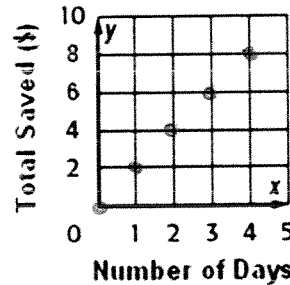
11. Mr. Reinard bought 5 pounds of feed for his chickens for \$10. How much did the feed cost per pound in dollars?

$\frac{\$10}{5 \text{ lbs}} = \frac{\square}{1 \text{ lb}}$   
 (÷5)

$\$2 \text{ per pound.}$

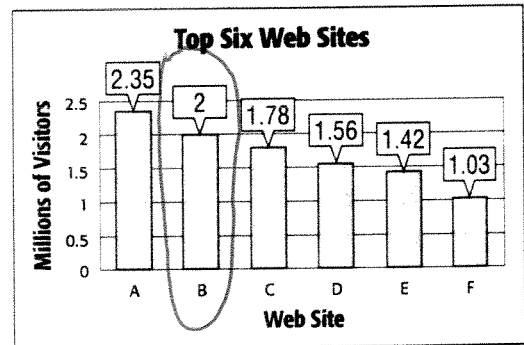
12. Tanya is saving \$2 each day to buy a new sweater. The table shows the amount that Tanya saves each day to buy a new sweater. Graph each ordered pair (days, total saved) and explain the meaning of the pattern on the graph.

Number of Days, x	Total Saved (\$), y	Ordered Pair (x, y)
0	0	(0, 0)
1	2	(1, 2)
2	4	(2, 4)
3	6	(3, 6)
4	8	(4, 8)



For every day that passes, we see Tanya saving \$2 every time.

13. The bar graph below shows the average number of visitors to different Web sites during one month.



How many visitors can Web site B expect to have in one year?

$\frac{2 \text{ million}}{1 \text{ month}} = \frac{\square}{12 \text{ months}}$   
 (x12)  
 24 million visitors

14. Find the LCM of 9 and 18.

$\text{LCM} = 18$

9, 18, 27, ...  
 18, 36, ...