

Practice Quiz

Directions: Show all of your work as you answer the questions in the space provided below. Write your answers in the right column.

Name: *Key*

Date:

Use the table to write each ratio.

Type of Ball	Number of Balls
Tennis Balls	12
Basketballs	8
Footballs	9
Soccer Balls	16

1. Basketballs to Soccer balls

$$1. \quad 8:16 = \frac{1}{2}$$

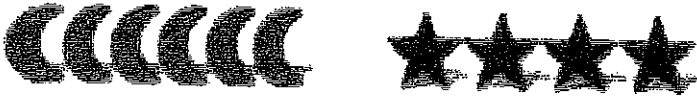
2. Tennis balls to Footballs

$$2. \quad \frac{12}{9} = \frac{4}{3}$$

3. Footballs to total balls

$$3. \quad \frac{9}{45} = \frac{1}{5}$$

4.



$$4. \quad \begin{array}{r} 4:6 \\ \hline 2:3 \\ \hline 8:12 \end{array}$$

Write three equivalent ratios for stars to moons.

5. Which is the better deal – an 8 oz package of pretzels for \$1.92 or a 12 oz package for \$2.64?

$$\frac{\$1.92}{8\text{oz}} = \frac{\$.24}{1\text{oz}} \quad \frac{\$2.64}{12\text{oz}} = \frac{\$.22}{1\text{oz}}$$

5.

12 oz is the better deal.

6. Barry earns \$36.00 for 6 hours of yard work. Henry earns \$24.00 for 3 hours of yard work. Who has the better hourly rate of pay?

$$\frac{\$36}{6\text{hr}} = \frac{\$6}{1\text{hr.}} \quad \frac{\$24}{3\text{hr.}} = \frac{\$8}{1\text{hr.}}$$

6.

Henry makes more.

7.

Number in Group	2	4	8	10
Cost (\$)	10.50	21	42	52.50

The table above shows the cost of canoeing for different-sized groups. Predict how much a group of 9 will pay.

7.

$$\frac{2}{10.50} = \frac{1}{5.25} = \frac{9}{47.25}$$

\$47.25

8. Find three equivalent ratios for 15:7.

8.

$$\frac{15}{7} = \frac{30}{14} = \frac{60}{28}$$

9. Brittney does sit-ups every day. The table shows how long it takes her to do different numbers of sit-ups. How long do you predict it will take Brittney to do 120 sit-ups?

Number of Sit-Ups	10	30	50	200	220
Time (min)	2	6	10	40	44

9.

$$\frac{10}{2} = \frac{120}{24}$$

24 min.

10. Use 15:100 to find two equivalent ratios.

$$\frac{15}{100} = \frac{3}{20} = \frac{6}{40}$$

10.

$$\frac{3:20}{6:40}$$

11. Tell whether the following is proportional. Explain your answer using mathematical reasoning.

$$\frac{3}{8} \neq \frac{6}{10}$$

$$3 \cdot 10 = 30$$

$$8 \cdot 6 = 48$$

$$30 \neq 48$$

11.

Yes

No

12. Find the missing value in the proportion.

$$\frac{3}{n} = \frac{15}{25}$$

$$\frac{15n}{15} = \frac{75}{15}$$

12.

$$n = 5$$

13. Find the missing value in the proportion.

$$\frac{n}{4} = \frac{18}{6}$$

$$\frac{6n}{6} = \frac{72}{6}$$

13.

$$n = 12$$

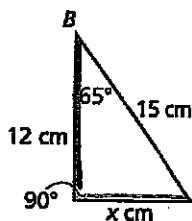
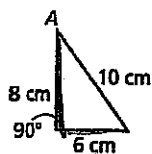
14. Shane's neighbor pledged \$1.25 for every 0.5 miles that Shane swims in the charity swim-a-thon. If Shane swims 3 miles, how much money will his neighbor donate?

$$\frac{\$1.25}{0.5 \text{ mi}} = \frac{x}{3 \text{ mi}} \quad \frac{.5x}{.5} = \frac{3.75}{.5}$$

$$\$7.50$$

14.

15. The two triangles are similar. Find the missing length x and the measure of $\angle A$.



$$\frac{x}{6} = \frac{12}{8}$$

$$8x = 72$$

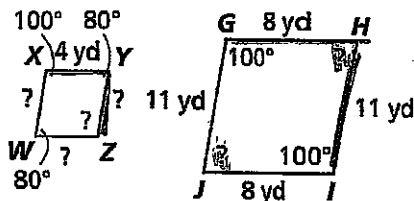
$$x = 9$$

15.

$$m\angle A = 65^\circ$$

$$x = 9 \text{ cm}$$

16. These figures are similar. Find the unknown measures.



16.

$$m\angle Z = 100^\circ$$

$$\frac{4}{8} = \frac{x}{11}$$

$$8x = 44$$

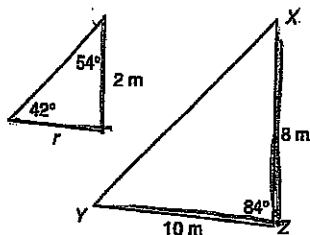
$$x = 5.5$$

17. Use the similar figures to find the following measurements.

$$\frac{r}{10} = \frac{2}{8}$$

$$8r = 20$$

$$r = 2.5$$



17.

$$\angle Y = 42^\circ$$

$$r = 2.5m$$

18. One grocery store sells a carton of a dozen eggs for \$1.99. Another grocery store sells a carton of 18 eggs for \$2.29. Which is the better deal?

$$\frac{\$1.99}{12 \text{ eggs}} = \frac{\$17}{1 \text{ egg}}$$

$$\frac{\$2.29}{18 \text{ eggs}} = \frac{\$13}{1 \text{ egg}}$$

19. Find the missing value in the proportion.

$$\frac{5}{7} = \frac{n}{35}$$

$$7n = 175$$

$$n = 25$$

19.

$$n = 25$$

20. Find the missing value in the proportion.

$$\frac{x}{6} = \frac{12}{36}$$

$$36x = 72$$

$$x = 2$$

20.

$$x = 2$$

21. Find the missing value in the proportion.

$$\frac{6}{p} = \frac{4}{28}$$

$$\frac{4p}{4} = \frac{168}{4}$$

21.

$$p = 42$$

22. Use a table to find three equivalent ratios.

60	<u>30</u>	<u>3</u>	<u>6</u>
100	<u>50</u>	<u>5</u>	<u>10</u>

22.

23. A 26-ounce box of Shaky Flake cereal costs \$5.79. A 14-ounce box costs \$2.69. Which box costs less per ounce?

Explain.

$$\frac{\$5.79}{26 \text{ oz}} = \frac{\$0.22}{1 \text{ oz}}$$

$$\frac{\$2.69}{14 \text{ oz}} = \frac{\$0.19}{1 \text{ oz}}$$

23.

14oz is the better deal.