

## Solving Proportions Worksheet

Name: \_\_\_\_\_

Date: \_\_\_\_\_ Section: \_\_\_\_\_

Each problem must to be set up this way:

- |   |                                |
|---|--------------------------------|
| 1. Write the proportion.                    | $\frac{8}{3} = \frac{192}{n}$  |
| 2. Write the cross products                 | $8 \cdot n = 192 \cdot 3$      |
| 3. Multiply                                 | $8n = 576$                     |
| 4. Undo multiplication by using<br>division | $\frac{8n}{8} = \frac{576}{8}$ |
| 5. Divide                                   | $n = 72$                       |

**Solve each proportion. Be sure to set it up the correct way and show all work.**

1.  $\frac{4}{9} = \frac{10}{x}$

2.  $\frac{5}{2} = \frac{6}{x}$

3.  $\frac{5}{2} = \frac{2}{x}$

4.  $\frac{21}{27} = \frac{x}{18}$

5.  $\frac{15}{21} = \frac{20}{y}$

6.  $\frac{26}{b} = \frac{39}{9}$

7.  $\frac{h}{108} = \frac{7}{18}$

8.  $\frac{45}{792} = \frac{70}{w}$

9.  $\frac{16}{120} = \frac{j}{15}$

10.  $\frac{350}{p} = \frac{1050}{60}$

11.  $\frac{g}{1134} = \frac{27}{729}$

12.  $\frac{40}{65} = \frac{z}{104}$

$$13. \frac{15}{y} = \frac{40}{12}$$

$$14. \frac{y}{32} = \frac{16}{10}$$

$$15. \frac{32.5}{25} = \frac{97.5}{q}$$

$$16. \frac{y}{42.3} = \frac{144}{56.4}$$

$$17. \frac{126}{k} = \frac{14}{3}$$

$$18. \frac{30}{x} = \frac{16}{40}$$

**19-22. For each word problem, write and then solve the proportion to find the answer. Be sure to set it up the correct way and show all work.**

19. A 380-cubic-centimeter sample of titanium has a mass of 1710 grams. Find the weight of a titanium sample that has a volume of 532 cubic centimeters. Write and then solve a proportion to find the answer.

20. The Bigtown football team outscored its opponents 5:2 last season. If their opponents scored 38 points, how many points did Bigtown score?

21. In the local coed softball league, the male to female ratio is 6:6. If there are 160 players in the league, how many are female?

22. In a certain desert environment there are a lot of small rodents. There also happen to be a lot of snakes that feed on the rodents. The ratio of rodents to rodent eating snakes is 13 to 3. If there are 4,000 snakes in the area, about how many rodents are there?