

➤ **Cross multiply to see if each pair of fractions forms a true proportion. Circle Yes if the cross products are equal. Circle No if they are not equal.**

1.  $\frac{5}{6} = \frac{32}{36}$  Yes No

$\frac{3}{2} = \frac{18}{12}$  Yes No

$\frac{7}{9} = \frac{39}{18}$  Yes No

2.  $\frac{1}{3} = \frac{28}{21}$  Yes No

$\frac{2}{5} = \frac{14}{35}$  Yes No

$\frac{13}{10} = \frac{37}{30}$  Yes No

➤ **Write the following proportions as two equal fractions.**

3. Three is to two as nine is to six.

Four is to one as twenty is to five.

4.  $4:16 = 1:4$

$5:2 = 25:10$

$x:3 = 24:36$

$3:4 = 21:n$

➤ **Find the missing term in each proportion. When cross multiplying, write the product containing the letter (x, etc.) to the left of the equal sign (=).**

5.  $\frac{x}{3} = \frac{6}{9}$

$\frac{8}{5} = \frac{16}{n}$

$\frac{8}{y} = \frac{20}{15}$

$\frac{6}{x} = \frac{18}{12}$

6.  $\frac{12}{8} = \frac{15}{x}$

$\frac{15}{25} = \frac{y}{5}$

$\frac{h}{9} = \frac{18}{27}$

$\frac{3}{16} = \frac{p}{64}$

7.  $8:12 = 14:n$

$6:8 = x:4$

$5:8 = y:32$

$10:6 = 5:h$

8.  $\underline{\hspace{1cm}}:24 = 5:6$

$4:\underline{\hspace{1cm}} = 16:20$

$3:16 = 9:\underline{\hspace{1cm}}$

$3:2 = \underline{\hspace{1cm}}:28$

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➤ Write the following proportions as two equal fractions.

3. Three is to two as nine is to six.

$\frac{3}{2} = \frac{9}{6}$

Four is to one as twenty is to five.

$\frac{4}{1} = \frac{20}{5}$

4. 4:16 = 1:4

$\frac{4}{16} = \frac{1}{4}$

5:2 = 25:10

$\frac{5}{2} = \frac{25}{10}$

x:3 = 24:36

$\frac{x}{3} = \frac{24}{36}$

3:4 = 21:n

$\frac{3}{4} = \frac{21}{x}$

➤ Find the missing term in each proportion. When cross multiplying, write the product containing the letter (x, etc.) to the left of the equal sign (=).

5.  $\frac{x}{3} = \frac{6}{9}$

$9x = 18$   
 $x = 2$

$\frac{8}{5} = \frac{16}{n}$

$8x = 80$   
 $x = 10$

$\frac{8}{y} = \frac{20}{15}$

$20y = 120$   
 $y = 6$

$\frac{6}{x} = \frac{18}{12}$

$18x = 72$   
 $x = 4$   $\frac{4}{3}$

6.  $\frac{12}{9} = \frac{15}{x}$

$12x = 120$   
 $x = 10$

$\frac{15}{25} = \frac{y}{5}$

$25y = 75$   
 $y = 3$

$\frac{h}{9} = \frac{18}{27}$

$27h = 162$   
 $h = 6$

$\frac{3}{16} = \frac{p}{64}$

$16p = 192$   
 $p = 12$

7. 8:12 = 14:n

$\frac{8}{12} = \frac{14}{n}$   
 $8n = 168$   $n = 21$

6:8 = x:4

$\frac{6}{8} = \frac{x}{4}$   
 $8x = 24$   $x = 3$

5:8 = y:32

$\frac{5}{8} = \frac{y}{32}$   
 $8y = 160$   $y = 20$

10:6 = 5:h

$\frac{10}{6} = \frac{5}{h}$   $10h = 30$   
 $h = 3$

8. \_\_\_:24 = 5:6

$\frac{x}{24} = \frac{5}{6}$   
 $6x = 120$   
 $x = 20$

4. \_\_\_ = 16:20

$\frac{4}{x} = \frac{16}{20}$   
 $16x = 80$   
 $x = 5$

3:16 = 9:\_\_\_

$\frac{3}{16} = \frac{9}{x}$   
 $3x = 144$   
 $x = 48$

3:2 = \_\_\_:28

$\frac{3}{2} = \frac{x}{28}$   
 $2x = 84$   
 $x = 42$