MathVine - Pre-Algebra

Name_____

Are Ratios Equal

Date_____ Period_____

Write Yes if the ratios are equal; No if they are not.

	yes/no

1. 5 : 7 and 15 : 21

2. 4 : 16 and 4 : 8

3. 9 : 15 and 21 : 24

4. 14 : 16 and 12 : 28

5. 3 : 18 and 2 : 12

6. 9 : 12 and 25 : 40

7. 5 : 35 and 2 : 4

8. 10 : 12 and 15 : 18

9. 1 : 2 and 4 : 8

10. 5 : 8 and 10 : 16

11. 24 : 28 and 18 : 21

12. 6 : 15 and 15 : 25

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Are Ratios Equal

Write Yes if the ratios are equal; No if they are not.

	yes/no
1. 5 : 7 and 15 : 21	Yes
2. 4 : 16 and 4 : 8	No
3. 9 : 15 and 21 : 24	No
4. 14 : 16 and 12 : 28	No
5. 3 : 18 and 2 : 12	Yes
6. 9 : 12 and 25 : 40	No
7. 5 : 35 and 2 : 4	No
8. 10 : 12 and 15 : 18	Yes
9. 1 : 2 and 4 : 8	Yes
10. 5 : 8 and 10 : 16	Yes
11. 24 : 28 and 18 : 21	Yes
12. 6 : 15 and 15 : 25	No

Solution Steps

1) $5 : 7$ and $15 : 21$

To express the ratio '5 to 7' as a fraction, place 5 over 7 and reduce

To express the ratio '15 to 21' as a fraction, place 15 over 21 and reduce

$\dfrac{15}{21}$ can be reduced, since 3 is a factor of both 15 and 21:

$$\dfrac{15}{21} \div \dfrac{3}{3} = \dfrac{5}{7}$$

The fraction is now in lowest terms

$\dfrac{5}{7}$ is equal to $\dfrac{15}{21}$

2) $4 : 16$ and $4 : 8$

To express the ratio '4 to 16' as a fraction, place 4 over 16 and reduce

To express the ratio '4 to 8' as a fraction, place 4 over 8 and reduce

$\dfrac{4}{16}$ can be reduced, since 4 is a factor of both 4 and 16:

$$\dfrac{4}{16} \div \dfrac{4}{4} = \dfrac{1}{4}$$

The fraction is now in lowest terms

$\dfrac{4}{8}$ can be reduced, since 4 is a factor of both 4 and 8:

$$\dfrac{4}{8} \div \dfrac{4}{4} = \dfrac{1}{2}$$

The fraction is now in lowest terms

$\dfrac{4}{16}$ is not equal to $\dfrac{4}{8}$

$9 : 15$ and $21 : 24$

To express the ratio '9 to 15' as a fraction, place 9 over 15 and reduce

To express the ratio '21 to 24' as a fraction, place 21 over 24 and reduce

$\frac{9}{15}$ can be reduced, since 3 is a factor of both 9 and 15:

$$\frac{9}{15} \div \frac{3}{3} = \frac{3}{5}$$

The fraction is now in lowest terms

$\frac{21}{24}$ can be reduced, since 3 is a factor of both 21 and 24:

$$\frac{21}{24} \div \frac{3}{3} = \frac{7}{8}$$

The fraction is now in lowest terms

$\frac{9}{15}$ is not equal to $\frac{21}{24}$

$14 : 16$ and $12 : 28$

To express the ratio '14 to 16' as a fraction, place 14 over 16 and reduce

To express the ratio '12 to 28' as a fraction, place 12 over 28 and reduce

$\frac{14}{16}$ can be reduced, since 2 is a factor of both 14 and 16:

$$\frac{14}{16} \div \frac{2}{2} = \frac{7}{8}$$

The fraction is now in lowest terms

$\frac{12}{28}$ can be reduced, since 4 is a factor of both 12 and 28:

$$\frac{12}{28} \div \frac{4}{4} = \frac{3}{7}$$

The fraction is now in lowest terms

$\frac{14}{16}$ is not equal to $\frac{12}{28}$

$3 : 18$ and $2 : 12$

To express the ratio '3 to 18' as a fraction, place 3 over 18 and reduce

To express the ratio '2 to 12' as a fraction, place 2 over 12 and reduce

$\frac{3}{18}$ can be reduced, since 3 is a factor of both 3 and 18:

$$\frac{3}{18} \div \frac{3}{3} = \frac{1}{6}$$

The fraction is now in lowest terms

$\frac{2}{12}$ can be reduced, since 2 is a factor of both 2 and 12:

$$\frac{2}{12} \div \frac{2}{2} = \frac{1}{6}$$

The fraction is now in lowest terms

$\frac{3}{18}$ is equal to $\frac{2}{12}$

$9 : 12$ and $25 : 40$

To express the ratio '9 to 12' as a fraction, place 9 over 12 and reduce

To express the ratio '25 to 40' as a fraction, place 25 over 40 and reduce

$\frac{9}{12}$ can be reduced, since 3 is a factor of both 9 and 12:

$$\frac{9}{12} \div \frac{3}{3} = \frac{3}{4}$$

The fraction is now in lowest terms

$\frac{25}{40}$ can be reduced, since 5 is a factor of both 25 and 40:

$$\frac{25}{40} \div \frac{5}{5} = \frac{5}{8}$$

The fraction is now in lowest terms

$\frac{9}{12}$ is not equal to $\frac{25}{40}$

$5 : 35$ and $2 : 4$

To express the ratio '5 to 35' as a fraction, place 5 over 35 and reduce

To express the ratio '2 to 4' as a fraction, place 2 over 4 and reduce

$\frac{5}{35}$ can be reduced, since 5 is a factor of both 5 and 35:

$\frac{5}{35} \div \frac{5}{5} = \frac{1}{7}$

The fraction is now in lowest terms

$\frac{2}{4}$ can be reduced, since 2 is a factor of both 2 and 4:

$\frac{2}{4} \div \frac{2}{2} = \frac{1}{2}$

The fraction is now in lowest terms

$\frac{5}{35}$ is not equal to $\frac{2}{4}$

$10 : 12$ and $15 : 18$

To express the ratio '10 to 12' as a fraction, place 10 over 12 and reduce

To express the ratio '15 to 18' as a fraction, place 15 over 18 and reduce

$\frac{10}{12}$ can be reduced, since 2 is a factor of both 10 and 12:

$\frac{10}{12} \div \frac{2}{2} = \frac{5}{6}$

The fraction is now in lowest terms

$\frac{15}{18}$ can be reduced, since 3 is a factor of both 15 and 18:

$\frac{15}{18} \div \frac{3}{3} = \frac{5}{6}$

The fraction is now in lowest terms

$\frac{10}{12}$ is equal to $\frac{15}{18}$

1 : 2 and 4 : 8

To express the ratio '1 to 2' as a fraction, place 1 over 2 and reduce

To express the ratio '4 to 8' as a fraction, place 4 over 8 and reduce

$\frac{4}{8}$ can be reduced, since 4 is a factor of both 4 and 8:

$\frac{4}{8} \div \frac{4}{4} = \frac{1}{2}$

The fraction is now in lowest terms

$\frac{1}{2}$ is equal to $\frac{4}{8}$

5 : 8 and 10 : 16

To express the ratio '5 to 8' as a fraction, place 5 over 8 and reduce

To express the ratio '10 to 16' as a fraction, place 10 over 16 and reduce

$\frac{10}{16}$ can be reduced, since 2 is a factor of both 10 and 16:

$\frac{10}{16} \div \frac{2}{2} = \frac{5}{8}$

The fraction is now in lowest terms

$\frac{5}{8}$ is equal to $\frac{10}{16}$

24 : 28 and 18 : 21

To express the ratio '24 to 28' as a fraction, place 24 over 28 and reduce

To express the ratio '18 to 21' as a fraction, place 18 over 21 and reduce

$\frac{24}{28}$ can be reduced, since 4 is a factor of both 24 and 28:

$\frac{24}{28} \div \frac{4}{4} = \frac{6}{7}$

The fraction is now in lowest terms

$\frac{18}{21}$ can be reduced, since 3 is a factor of both 18 and 21:

$\frac{18}{21} \div \frac{3}{3} = \frac{6}{7}$

The fraction is now in lowest terms

$\frac{24}{28}$ is equal to $\frac{18}{21}$

6 : 15 and 15 : 25

To express the ratio '6 to 15' as a fraction, place 6 over 15 and reduce

To express the ratio '15 to 25' as a fraction, place 15 over 25 and reduce

$\frac{6}{15}$ can be reduced, since 3 is a factor of both 6 and 15:

$$\frac{6}{15} \div \frac{3}{3} = \frac{2}{5}$$

The fraction is now in lowest terms

$\frac{15}{25}$ can be reduced, since 5 is a factor of both 15 and 25:

$$\frac{15}{25} \div \frac{5}{5} = \frac{3}{5}$$

The fraction is now in lowest terms

$\frac{6}{15}$ is not equal to $\frac{15}{25}$