

7.2 Using Tables to Explore Equivalent Ratios and Rates

Pg. 356

4/23/18

Learn to use a table to find equivalent ratios and rates.

Reading Math

Finding equivalent ratios is sometimes referred to as "scaling up" or "scaling down."

Apr 11-10:29 AM

Apr 11-10:30 AM

Use a table to find ratios equivalent to 3 to 2.

Original Ratio $3 \cdot 2$ $3 \cdot 3$ $3 \cdot 4$

Pints of yellow	3	6	9	12
Pints of blue	2	4	6	8

$2 \cdot 2$ $2 \cdot 3$ $2 \cdot 4$

You can increase amounts but keep them in the same ratio by multiplying both the numerator and denominator of the ratio by the same number. The ratios 3 to 2, 6 to 4, 9 to 6, and 12 to 8 are equivalent. You can also decrease amounts in the same ratio by dividing the numerator and denominator by the same number.

Use a table to find the equivalent ratios.

$$\frac{6}{7}$$

$$\frac{6}{7} \begin{matrix} \cdot 2 \\ \cdot 3 \\ \cdot 10 \end{matrix} \left| \begin{matrix} 12 \\ 14 \\ 21 \\ 70 \end{matrix} \right| \begin{matrix} 18 \\ 21 \\ 70 \end{matrix}$$

$$\frac{6 \cdot 2}{7} = \frac{12}{14} = \frac{18}{21} = \frac{60}{70}$$

Apr 11-10:30 AM

Apr 11-10:31 AM

Helpful Hint

Multiplying by 2, 3, and 4 will give you three equivalent ratios, but there are many other equivalent ratios that are correct.

Use a table to find the equivalent ratios.

3 to 5

3	9	6
5	15	10

·3 ·2

Use a table to find the equivalent ratios.

48:36

$$\frac{48}{36} \stackrel{\div 12}{=} \frac{4}{3} \stackrel{\cdot 2}{=} \frac{8}{6}$$

Apr 11-10:31 AM

Apr 11-10:31 AM

Use a table to find the equivalent ratios.

$\frac{3}{8}$

$$\frac{3}{8} \stackrel{\cdot 10}{=} \frac{30}{80} \stackrel{\div 2}{=} \frac{15}{40}$$

Use a table to find the equivalent ratios.

2 to 9

2	4	10
9	18	45

·2 ·5

Use a table to find the equivalent ratios.

36:12

36	6	3
12	2	1

·6
÷2

Apr 11-10:32 AM

Apr 11-10:32 AM

Several groups of friends are going to take a shuttle bus to the park. The table shows how much the different groups will pay in all. Predict how much a group of 15 friends will pay.

Number in Group	6	12	18
Bus Fare(\$)	12	24	36

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

$$\frac{15}{30}$$

\$30

Apr 11-10:32 AM

Several groups of friends are purchasing tickets to an amusement park. The table shows how much the different groups will pay in all. Predict how much a group of 7 friends will pay.

Number in Group	4	6	8
Tickets(\$)	20	30	40

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

$$\frac{7}{35}$$

\$35

Apr 11-10:32 AM

Lesson Quiz: Part I

Use a table to find three equivalent ratios.

1. $\frac{1}{3} = \frac{2}{6} = \frac{10}{30}$

2. $\frac{9}{4} = \frac{27}{12} = \frac{36}{16}$

3. $\frac{12}{60} = \frac{2}{10} = \frac{1}{5}$

Apr 11-10:33 AM

4. Fred is saving for a new sound system. The table shows some amounts he could save in different numbers of weeks. Predict the amount of his savings after 10 weeks.

Weeks	4	8	12
Savings	50	100	150

$$\frac{4}{50} = \frac{2}{25} = \frac{10}{125}$$

\$125

Apr 11-10:34 AM