



Find Equivalent Ratios

● Check Understanding

Possible answer:

Red	6	12	18	24	30
Blue	5	10	15	20	25

Possible explanation: The ratios are equivalent to 6 : 5 because I multiplied both numbers in the ratio by the same number to find each equivalent ratio.

ACTIVITY ANSWERS

The order of ratios in each table may vary.

2	4	6	8	10
1	2	3	4	5

2	4	6	8	10
3	6	9	12	15

1	2	3	4	5
3	6	9	12	15

1	2	3	4	5
4	8	12	16	20

5	10	15	20	25
1	2	3	4	5

4	8	12	16	20
3	6	9	12	15

●● Check Understanding

Possible answer:

Red	6	12	18	24	30
Blue	5	10	15	20	25

Possible explanation: The ratios are equivalent to 12 : 10 because I multiplied or divided both numbers in the ratio by the same number to find each equivalent ratio.

ACTIVITY ANSWERS

The order of ratios in each table may vary.

2	4	6	8	10
1	2	3	4	5

2	4	6	8	10
3	6	9	12	15

1	2	3	4	5
3	6	9	12	15

1	2	3	4	5
4	8	12	16	20

5	10	15	20	25
1	2	3	4	5



Find Equivalent Ratios *continued*

4	8	12	16	20
3	6	9	12	15

The following Ratio Cards are not used:
15 : 5, 5 : 6, 4 : 10, 3 : 1, 4 : 1, 9 : 3

●●● Check Understanding

There are 66 red marbles in the large bag and 18 red marbles in the small bag.

Possible work:

$$\div 4 \quad \times 11$$

Red	24	6	66
Blue	20	5	55

$$\div 4 \quad \times 3$$

Red	24	6	18
Blue	20	5	15

ACTIVITY ANSWERS

The order of ratios in each table may vary.

2	4	6	8	16
3	6	9	12	24

5	10	15	20	40
3	6	9	12	24

3	6	9	15	24
5	10	15	25	40

4	8	12	16	32
3	6	9	12	24

3	9	12	18	24
4	12	16	24	32

3	6	9	12	24
2	4	6	8	16

The following Ratio Cards are not used:
3 : 1, 4 : 1, 9 : 3, 15 : 5, 5 : 6, 4 : 10, 15 : 11, 15 : 12, 4 : 5,
3 : 8, 10 : 4, 12 : 2



Use Ratio and Rate Vocabulary

● Check Understanding

\$10.50; Possible answer: First, I divide the numbers in the ratio, $7.50 : 5$, to find the unit rate for dollars per pound: $7.50 \div 5 = 1.50$. Then I multiply the number of pounds by the unit rate: $7 \times 1.50 = 10.50$. So, a 7-lb bag of apples would cost \$10.50.

RECORDING SHEET

I know the units need to be the same to compare the prices. First, I **convert** the length of the flannel fabric to feet. The **ratio** of feet to yards is 3 feet : 1 yard. The **rate** is 3 feet per yard. The **unit rate** is 3. I **multiply** the number of yards by the unit rate. The result is 9.

The flannel fabric has a length of 9 feet. Now, I can find the unit cost of each fabric in **dollars per foot**. I **divide** to find an **equivalent ratio**.

The flannel fabric costs \$2 per foot. The fleece fabric costs \$2.20 per foot. The flannel fabric costs **less** per foot, so it is the better buy.

●● Check Understanding

\$6.40 per yard; Possible answer: First, I need to convert the length of the fabric to yards. I know the ratio of feet to yards is 3 feet : 1 yard. I divide the length in feet by 3 to find the length of the fabric in yards: $4.5 \div 3 = 1.5$. Then I divide the cost by the length in yards to find the cost per yard: $9.60 \div 1.5 = 6.40$. So, the cost per yard is \$6.40.

RECORDING SHEET

I know the units need to be the same to compare the prices. First, I **convert** the length of the flannel fabric to feet. The **ratio** of feet to yards is 3 feet : 1 yard. The **rate** is 3 feet per yard. The **unit rate** is 3. I **multiply** the number of yards by the unit rate. The result is **9**.

The flannel fabric has a length of **9** feet. Now, I can find the unit cost of each fabric in **dollars per foot**. I **divide** to find an **equivalent ratio**.

Flannel

Price (\$)	12.60	1.40
Length (ft)	9	1

Fleece

Price (\$)	8.75	1.75
Length (ft)	5	1

The flannel fabric costs \$**1.40** per foot. The fleece fabric costs \$**1.75** per foot. The flannel fabric costs **less** per foot, so it is the better buy.



Use Ratio and Rate Vocabulary *continued*

●●● Check Understanding

\$6.40 per yard; Possible answer: First, I have to convert the length of the fabric to yards. I know the ratio of feet to yards is 3 feet : 1 yard. So, the unit rate is 3. I divide the length in feet by the unit rate to find the length of the fabric in yards: $4.5 \div 3 = 1.5$. Then I divide the cost by the length in yards to find the cost per yard: $\$9.60 \div 1.5 = \6.40 . The cost per yard is \$6.40.

RECORDING SHEET

I know the units need to be the same to compare the prices. First, I **convert** the number of gallons Bottle A holds to fluid ounces. The **ratio** of fluid ounces to gallons is 128 fluid ounces : 1 gallon. The **rate** is **128** fluid ounces per gallon. The **unit rate** is 128. I **multiply** the number of gallons by the **unit rate**. The result is **64**.

Bottle A holds **64** fluid ounces. Now, I can find the cost of each bottle in **dollars per fluid ounce**. I **divide** to find an **equivalent ratio**.

Price (\$)	5.12	0.08
Fluid Ounces	64	1

Price (\$)	3.64	0.07
Fluid Ounces	52	1

The 0.5-gallon bottle costs \$**0.08** per fluid ounce.

The 52-fluid ounce bottle costs \$**0.07** per fluid ounce.

The 52-fluid ounce bottle costs **less** per fluid ounce, so it is the better buy.



Percent 4-in-a-Row

● Check Understanding

210 students wore school colors.

Possible work:

70% written as a fraction is $\frac{70}{100}$, or $\frac{7}{10}$.

$$\frac{7}{10} \times 300 = \frac{2,100}{10} = 210$$

ACTIVITY ANSWERS

- 80% of 30 is 24.
- 20% of 200 is 40.
- 10% of 440 is 44.
- 40% of 20 is 8.
- 20% of 250 is 50.
- 90% of 40 is 36.
- 30% of 200 is 60.
- 60% of 50 is 30.
- 40% of 300 is 120.
- 40% of 180 is 72.
- 60 is 20% of 300.
- 160 is 80% of 200.
- 28 is 40% of 70.
- 80 is 50% of 160.
- 15 is 20% of 75.
- 100 is 25% of 400.
- 72 is 30% of 240.
- 10 is 40% of 25.
- 12 is 60% of 20.
- 180 is 30% of 600.

●● Check Understanding

304 students wore school colors.

Possible work:

80% written as a fraction is $\frac{80}{100}$, or $\frac{4}{5}$.

$$\frac{4}{5} \times 380 = \frac{1,520}{5} = 304$$

ACTIVITY ANSWERS

- 80% of 25 is 20.
- 20% of 200 is 40.
- 20% of 250 is 50.
- 30% of 200 is 60.
- 60% of 250 is 150.
- 60% of 50 is 30.
- 80% of 175 is 140.
- 20% of 125 is 25.
- 45% of 40 is 18.
- 75% of 120 is 90.
- 20% of 50 is 10.
- 90% of 40 is 36.
- 60% of 200 is 120.
- 110 is 40% of 275.
- 70 is 25% of 280.
- 80 is 25% of 320.
- 200 is 40% of 500.
- 300 is 80% of 375.
- 72 is 40% of 180.
- 250 is 40% of 625.
- 12 is 80% of 15.
- 125 is 50% of 250.
- 8 is 5% of 160.
- 75 is 60% of 125.



Percent 4-in-a-Row *continued*

●●● Check Understanding

304 students wore school colors.

Possible work:

80% written as a fraction is $\frac{80}{100}$, or $\frac{4}{5}$.

$$\frac{4}{5} \times 380 = \frac{1,520}{5} = 304$$

ACTIVITY ANSWERS

80% of 25 is 20.

20% of 185 is 37.

20% of 310 is 62.

30% of 60 is 18.

60% of 280 is 168.

60% of 50 is 30.

80% of 175 is 140.

35% of 40 is 14.

75% of 120 is 90.

20% of 125 is 25.

90% of 40 is 36.

60% of 420 is 252.

110 is 40% of 275.

70 is 25% of 280.

18 is 15% of 120.

240 is 40% of 600.

300 is 80% of 375.

72 is 40% of 180.

26 is 40% of 65.

12 is 80% of 15.

18 is 5% of 360.

75 is 60% of 125.

65 is 25% of 260.

210 is 70% of 300.