Cumulative Review

Determine the scale factor, and then find the missing value.

1. $\frac{7}{x} = \frac{21}{18}$

2. $\frac{9}{11} = \frac{36}{x}$

3. Marge makes donuts in packages of 6.

Packages *x*	Process	Donuts *y*
1		
2		
3		
x		

What is the general rule for this scenario? $y =$ _____

Is the scenario additive or multiplicative? _____

A gentleman requested 7 packages. How many donuts does Marge have to make? _____

Practice

After completing each problem, check your answers with your partner and discuss your reasoning.

1. Lacy wanted to make a quilt, so she went to the store to buy fabric. The cost of the fabric was $6 for 3 yards. How much will it cost Lacy to buy 14 yards of fabric?

Units	Ratio 1	Unit rate	Ratio 2
$\frac{\text{Dollars}}{\text{Yards}}$	$\frac{6}{3}$ =	_____ =	$\frac{\square}{14}$

2. Steven had lots of clothes to wash. He can wash 2 loads of clothes in 80 minutes. How long will it take him to wash 5 loads of clothes?

Units	Ratio 1	Unit rate	Ratio 2
$\frac{\text{Minutes}}{\text{Loads}}$	$\frac{80}{2}$ =	_____ =	$\frac{\square}{5}$

3. Rachel makes greeting cards as a hobby. She can make 5 cards in 60 minutes. How long will it take her to make 12 cards?

Units	Ratio 1	Unit rate	Ratio 2
$\frac{\text{Cards}}{\text{Minutes}}$	$\frac{5}{60}$ =	_____ =	$\frac{12}{\square}$

Name: _____

Independent Practice

1. Robyn earns $24 for every 3 hours she works. If she works 20 hours this week, how much money will she earn?

Units	Ratio 1	Unit rate	Ratio 2
$\frac{\text{Dollars}}{\text{Hours}}$	$\frac{24}{3}$ =	_____ =	$\frac{\square}{20}$

2. Finn can run 3 miles in 21 minutes. At this rate, how long would it take him to run 7 miles?

Units	Ratio 1	Unit rate	Ratio 2
$\frac{\text{Minutes}}{\text{Miles}}$	$\frac{21}{3}$ =	_____ =	$\frac{\square}{7}$

3. Michele works at a florist and uses 32 flowers for every 4 bouquets. How many flowers would she need for 10 bouquets?

Units	Ratio 1	Unit rate	Ratio 2
$\frac{\text{Flowers}}{\text{Bouquets}}$	$\frac{32}{4}$ =	_____ =	$\frac{\square}{10}$

Answer Key: Cumulative Review

Determine the scale factor, and then find the missing value.

1. $\frac{7}{x} = \frac{21}{18}$

$$\frac{7 \times \boxed{3}}{x \times \boxed{3}} = \frac{21}{18}$$

$$x \times 3 = 18$$

$$\boxed{6} \times 3 = 18$$

$$6 = x$$

$$\frac{7}{\boxed{6}} = \frac{21}{18}$$

2. $\frac{9}{11} = \frac{36}{x}$

$$\frac{9 \times \boxed{4}}{11 \times \boxed{4}} = \frac{36}{x}$$

$$11 \times 4 = x$$

$$44 = x$$

$$\frac{9}{11} = \frac{36}{\boxed{44}}$$

3. Marge makes donuts in packages of 6.

Packages x	Process	Donuts y
1	6(1)	6
2	6(2)	12
3	6(3)	18
x	6(x)	$6x$

What is the general rule for this scenario? $y =$ 6x

Is the scenario additive or multiplicative? multiplicative

A gentleman requested 7 packages. How many donuts does Marge have to make? 42 donuts

Answer Key: Practice

After completing each problem, check your answers with your partner and discuss your reasoning.

1. Lacy wanted to make a quilt, so she went to the store to buy fabric. The cost of the fabric was $6 for 3 yards. How much will it cost Lacy to buy 14 yards of fabric?

Units	Ratio 1	Unit rate	Ratio 2
$\frac{\text{Dollars}}{\text{Yards}}$	$\frac{6 \div 3}{3 \div 3}$ =	$\frac{2 \times 14}{1 \times 14}$ =	$\frac{28}{14}$

2. Steven had lots of clothes to wash. He can wash 2 loads of clothes in 80 minutes. How long will it take him to wash 5 loads of clothes?

Units	Ratio 1	Unit rate	Ratio 2
$\frac{\text{Minutes}}{\text{Loads}}$	$\frac{80 \div 2}{2 \div 2}$ =	$\frac{40 \times 5}{1 \times 5}$ =	$\frac{200}{5}$

3. Rachel makes greeting cards as a hobby. She can make 5 cards in 60 minutes. How long will it take her to make 12 cards?

Units	Ratio 1	Unit rate	Ratio 2
$\frac{\text{Cards}}{\text{Minutes}}$	$\frac{5 \div 5}{60 \div 5}$ =	$\frac{1 \times 12}{12 \times 12}$ =	$\frac{12}{144}$

Answer Key: Independent Practice

1. Robyn earns $24 for every 3 hours she works. If she works 20 hours this week, how much money will she earn?

Units	Ratio 1		Unit rate		Ratio 2
$\frac{\text{Dollars}}{\text{Hours}}$	$\frac{24 \div 3}{3 \div 3}$	=	$\frac{8 \times 20}{1 \times 20}$	=	$\frac{160}{20}$

2. Finn can run 3 miles in 21 minutes. At this rate, how long would it take him to run 7 miles?

Units	Ratio 1		Unit rate		Ratio 2
$\frac{\text{Minutes}}{\text{Miles}}$	$\frac{21 \div 3}{3 \div 3}$	=	$\frac{7 \times 7}{1 \times 7}$	=	$\frac{49}{7}$

3. Michele works at a florist and uses 32 flowers for every 4 bouquets. How many flowers would she need for 10 bouquets?

Units	Ratio 1		Unit rate		Ratio 2
$\frac{\text{Flowers}}{\text{Bouquets}}$	$\frac{32 \div 4}{4 \div 4}$	=	$\frac{8 \times 10}{1 \times 10}$	=	$\frac{80}{10}$