W-MF Math Fundamentals 2/16

Fraction

$\frac{\text{part}}{\text{whole}}$

small $\frac{4}{12}$ large $\frac{8}{12}$

Ratio "to"

part : part

small : large

4 : 8

$\frac{4}{4}$ $\frac{4}{4}$

$\boxed{1:2}$

small popcorns → 4

large popcorns → 8

Nates ate 192 donuts in 8 hours

unit prices/rate

donut/hr

Donuts Hours

$\frac{192}{8} : \frac{8}{8}$

24 : 1

consumes $\frac{24 \text{ donuts}}{1 \text{ hour}}$

Nate committed 36 felonies over a nine day period. How many felonies were committed per day?

Felonies Days

$\frac{36}{9} : \frac{9}{9}$

$\boxed{4:1}$

$$\frac{\text{cups of oil}}{\text{batches of popcorn}} : \quad \frac{\boxed{4}}{\boxed{2}} = \frac{x}{6}$$

$$\frac{4}{\boxed{2}} = \frac{x}{6}$$

$$\frac{2x}{2} = \frac{24}{2}$$

$$\frac{4 * 6}{2} = \frac{24}{2} = 12$$

$$x = 12$$

12 sundaes = 6 sundaes

72 Reese's Cups

$$\frac{\boxed{12}}{72} = \frac{6}{x}$$

$$\frac{(72)(6)}{12} = \frac{432}{12}$$

$$\boxed{36}$$

Ratio Wording Name:

Solve each problem.

Ex) At the movie theater the ratio of small popcorns sold to large popcorns sold was 9:2. For every _____ large popcorns sold there are _____ small popcorns sold.

1) For every 2 hamburgers sold at the malt shop there are 4 hotdogs sold. What is the ratio of hotdogs sold to hamburgers sold?

2) For every 7 girls on a softball team there are 6 boys. What is the ratio of boys to girls?

3) The ratio of males to females birds in a bird cage was 6:4. For every 6 males there are 4 females.

4) At the carnival the ratio of rides to games was 6:2. For every 6 rides there are 2 games.

5) In the class election for every 5 Billy Nancy got, Billy got 7 Nancy. What is the ratio of votes for Nancy to votes for Billy?

6) At the store for every 6 books sold there were 5 movies sold. What is the ratio of books sold to movies sold?

7) For every 8 cars in a parking lot there are 5 trucks. What is the ratio of cars to trucks in the parking lot?

8) For every 5 diet sodas a burger shop sold there were 7 regular sodas sold. What is the ratio of regular sodas sold to diet sodas sold?

9) In a bag of candy for every 5 sugar pieces there are 6 chocolate pieces. What is the ratio of chocolate pieces to sugar pieces?

10) For every 2 Wii games Olivia owned she had 6 PS3 games. What is her ratio of Wii games to PS3 games?

11) In a neighborhood the ratio of old homes to new homes was 5:4. For every _____ new homes in the neighborhood there were _____ old homes.

12) At the the thrift store the ratio of long sleeve shirts to short sleeve shirts was 6:4. For every _____ long sleeve shirts there were _____ short sleeve shirts.

Answers

Ex.	2	9
1.	4:2	
2.	2:1	
3.	6:7	
4.		
5.		
6.		
7.		
8.		
9.		
10.		
11.		
12.		

1-10	92	83	75	67	58	50	42	33	25	17
11-12	8	0								

Solve each problem.

1) A scientist used 6 gallons of liquid for every 8 hours he works. He uses ____ of a gallon each hour he works.

$\frac{6}{8}:\frac{8}{8}$ $\frac{6}{8}:1$ or $\frac{3}{4}:1$

2) A jogger travelled 14 kilometers in 2 days. What is the rate he travelled per day?

$\frac{14}{2}:\frac{2}{2}$ 7:1

3) A toy company used 8 pints of plastic to make 4 action figures, which is a rate of ___ pints per figure.

$\frac{8}{4}:\frac{4}{4}$ 2:1

4) A bouquet had 6 flowers and sold for $30, which is a rate of $___ per flower.

$\frac{6}{6}$ $\frac{\$30}{6}$

5) A fair owner made 8 dollars when a group of 2 people entered, which is a rate of ___ dollar per person.

$\frac{\$8}{2}:\frac{2}{2}$ $\$4:1$

6) A carpenter installed 60 sheets of drywall in 10 minutes. What is the rate per minute?

$\frac{60}{10}:\frac{10}{10}$ 6

7) A movie theater went through 6 pounds of popcorn every 8 hours. They went through ____ of a pound every hour.

pounds hour

$\frac{6}{8}:\frac{8}{8}$ $\frac{6}{8}:1$

8) An industrial machine is able to make 30 pens in 5 seconds. What is the rate made per second?

9) It took a pet store 7 weeks to sell 56 cats. What is the rate sold per week?

10) For every 9 miles Faye jogged, Will jogged 2 miles. If Faye jogged 1 mile, how far would Will have jogged?

11) During the lunch rush a fast food joint sold 10 sodas and earned $50, which is a rate of ___ dollars per soda.

12) A baker used 5 bags of flour every 6 days. He used ____ of a bag each day.

13) Cody earned $50 for mowing 5 lawns. What is the rate earned per lawn mowed?

14) A carpenter used 2 boxes of nails to build 4 bird houses. He used ____ of a box on each bird house.

15) A forklift operator moved 63 pallets in 9 hours. What is the rate moved per hour?

Answers

1. 3/4
2. 7
3. 2
4. $5
5. $4
6. 6
7. 3/4
8. _____
9. _____
10. _____
11. _____
12. _____
13. _____
14. _____
15. _____

1-10	93	87	80	73	67	60	53	47	40	33
11-15	27	20	13	7	0					

Finding Ratios and Unit Rate

Name:

Find the ratio and unit rate for each problem.

		Ratio	Rate	
Ex)	22 shirts for 154 dollars	154:22	7	dollars per shirt
1)	4 game controllers had 48 buttons	48:4 / 4 4	12	buttons per controller
2)	4 classrooms with 96 students	96:4 / 4 4	24	students per class
3)	8 students earned 72 dollars total	72:8 / 8 8	9	dollars per student
4)	10 cell phone covers for 70 dollars	70:10 / 10 10	7	dollars per cover
5)	8 pies eaten in 2 minutes	8:2 / 2 2	4	pies per minute
6)	27 people bought 459 tickets	459:27	17	tickets per person
7)	200 centimeters of snow in 10 hours			centimeters per hour
8)	4 tanks with 292 fish			fish per tank
9)	12 pints of juice in 3 containers			pints per container
10)	6 chocolate bars for $18			dollars per bar
11)	8 hours to drive 448 miles			miles per hour
12)	20 copies in 4 minutes			copies per minute
13)	171 dollars for mowing 9 lawns			dollars per lawn
14)	7 minutes to type 805 words			words per minute
15)	49 brownies took 147 cups of fudge			cups per brownie

Answers

Ex.	154:22	7
1.	48:4	12
2.	96:4	24
3.	72:8	9
4.	70:10	7
5.		
6.		
7.		
8.		
9.		
10.		
11.		
12.		
13.		
14.		
15.		

1-10	93	87	80	73	67	60	53	47	40	33
11-15	27	20	13	7	0					

Using Double Numberlines for Ratios

Name:

Use the double numberline to solve the problems.

1) A movie theater put 4 cups of oil for every 2 batches of popcorn they made. After they had made 6 batches of popcorn, how much oil would they have used?

popcorn: 2 → 6 (*3)
oil: 4 → 12

2) A store had a sale where you could get 6 bags of cashews for $8. If you wanted to buy 60 bags, how much would it cost?

cashews: 6 → 60 (*10)
price: $8 → $80 (*10)

3) In a video game for every 7 enemies defeat, you earned 6 points. If you defeated 14 enemies, how many points would you have earned?

enemies: 7 → 14
points: 6 → 12

4) On her MP3 player for every 8 pop song Maria had she also had 10 country song. If she has 24 pop songs on her MP3 player, how many country songs does she have?

pop: 8 → 24 (*3)
country: 10 → 30 (*3)

5) A builder could get 3 sheets of sheetrock for $2. If he bought 15 sheets, how much money would he have spent?

sheetrock: 3 → 15
price: $2 → $10 (*5)

6) A box of candy had 8 cherry pieces for every 3 lemon pieces. If the box had 30 lemon pieces, how many cherry pieces would there be?

lemon: 3 → 30
cherry: 8 → 80 (*10)

7) The ratio of boys to girls at the park was 3 to 2. If there were 21 boys, how many girls were there?

boys
girls

8) For every 7 cans Luke collected for recycling he earned 10 cents. After he collected 21 cans, how much money would he have earned?

cans
money

Answers

1. 12
2.
3.
4.
5.
6.
7.
8.

1-8	88	75	63	50	38	25	13	0

Using Unit Prices

Name:

Solve each problem.

1) On *Monday* the price for bottled water was 5 bottles for $10.90. On *Saturday* the price was 4 bottles for $8.56. Which day had the higher unit price?

Monday
5 : $10.90
5 / 5

Saturday
4 : 8.56
4 / 4

2) At a candy store you could get 3 giant lollipops for $8.94. How much would it cost to buy 6 lollipops?

3 : 8.94
× 2
17.88

6 : $17.88

3) At a farming supply store 7 pounds of seed cost $185.08. If a farmer needed 3 pounds of seeds, how much would it cost him?

$185.08 : 7
7 / 7

23.58
7) 185.08
−14
25

$23.58

4) In *September* a clothing store had a sale where you could get 7 scarves for $30.10. In *October* the price was changed to 3 scarves for $12.99. On which month did a scarf cost the most?

5) A store had 3 *blue* chairs for $39.96 or 7 *red* chairs for $93.59. Which color chair has a lower unit price?

6) An ice company charged $1.40 for 5 bags of ice. If a convenience store bought 7 bags of ice, how much would it have cost them?

7) At the *toy store* you could get 3 board games for $26.79. *Online* the price for 4 board games is $35.92. Which place has the highest price for a board game?

8) At a restaurant 4 *hotdogs* cost $9.68 and 5 *hamburgers* cost $11.75. Which food has the lower unit price?

9) A shoe store was having a back to school sale where you could buy 7 pairs of shoes for $71.54. If a large family decided to buy 4 pairs of shoes, how much would it cost them?

10) A video game store was getting rid of old games, selling them 7 for $134.19. If they sold 5 games, how much money would they have made?

Answers

1. Mon $2.18 Sat $2.14
2.
3.
4.
5.
6.
7.
8.
9.
10.

1-10	90	80	70	60	50	40	30	20	10	0