

Fraction

	small	large
$\frac{\text{part}}{\text{whole}}$	$\frac{4}{12}$	$\frac{8}{12}$

Ratio "to"
part : part

small : large

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

$$\boxed{1:2}$$

Small popcorns → 4
Large popcorns → 8

Nate ate 192 donuts in 8 hours

unit price/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.

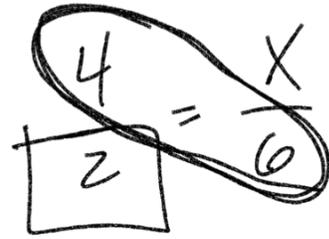
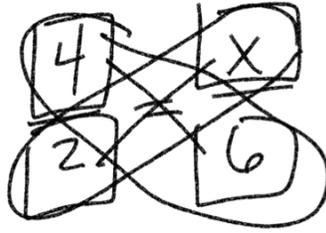
How many felonies were
committed per day?

Felonies Days

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

$$\boxed{4:1}$$

Cups of oil
batches of
popcorn

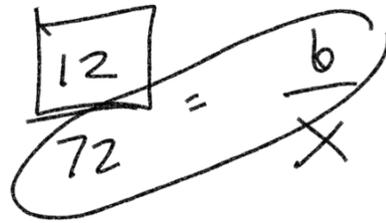


$$\frac{2X}{2} = \frac{24}{2}$$

$$X = 12$$

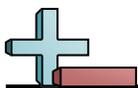
$$\frac{4 * 6}{2} = \frac{24}{2} = 12$$

12 sundaes
72 Reese's Cups = 6 sundaes



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

$$36$$



Solve each problem.

Answers

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.

Ex. 2 9

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?

1. 4:2

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

2. 2:1
6:7

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

3. _____
4. _____

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

5. _____
6. _____

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?

7. _____
8. _____

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

9. _____
10. _____

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?

11. _____
12. _____

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.

**Solve each problem.****Answers**

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

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

1. 3/4

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

$$\frac{14}{2} = \frac{2}{2} \quad 2 = 1$$

2. 7

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

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

3. _____

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

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

4. \$5

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

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

5. \$4

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

$$\frac{60}{10} = \frac{10}{10} \quad 6 = 1$$

6. 6

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

$$\frac{6 \text{ pounds}}{8 \text{ hour}} = \frac{8}{8} \quad \frac{6}{8} = \frac{3}{4}$$

7. 3/4

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

8. _____

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

9. _____

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

10. _____

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

11. _____

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

12. _____

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

13. _____

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

14. _____

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

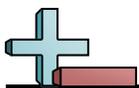
15. _____



Find the ratio and unit rate for each problem.

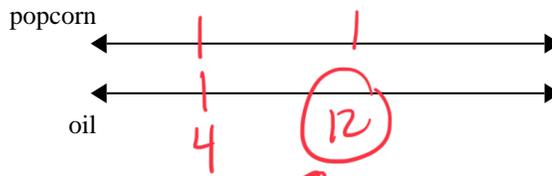
Answers

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

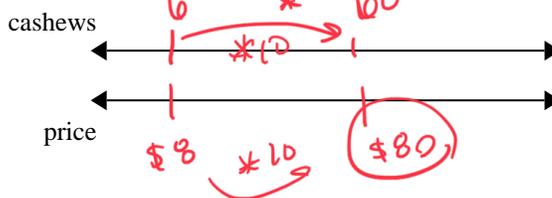


Use the double numberline to solve the problems.

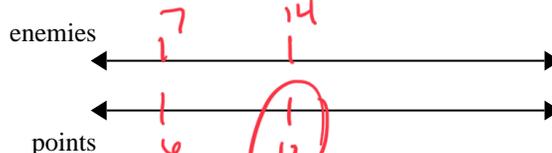
1) A movie theater put 4 cups of oil for every 2 batches of popcorn they made. After they had made 6 batches of popcorn, how much oil would they have used?



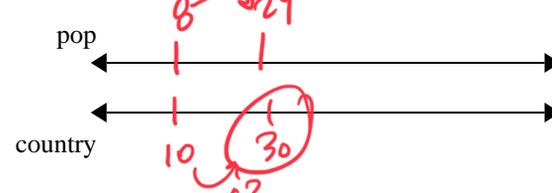
2) A store had a sale where you could get 6 bags of cashews for \$8. If you wanted to buy 60 bags, how much would it cost?



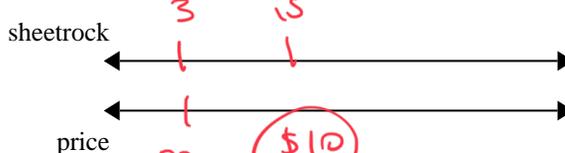
3) In a video game for every 7 enemies defeat, you earned 6 points. If you defeated 14 enemies, how many points would you have earned?



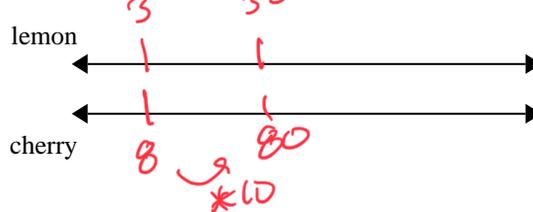
4) On her MP3 player for every 8 pop song Maria had she also had 10 country song. If she has 24 pop songs on her MP3 player, how many country songs does she have?



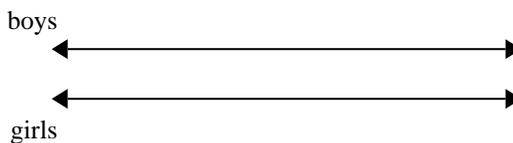
5) A builder could get 3 sheets of sheetrock for \$2. If he bought 15 sheets, how much money would he have spent?



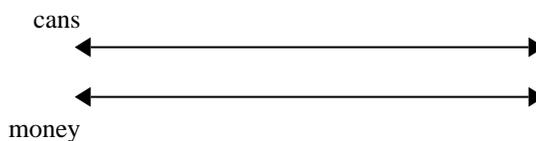
6) A box of candy had 8 cherry pieces for every 3 lemon pieces. If the box had 30 lemon pieces, how many cherry pieces would there be?



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



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?



Answers

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



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

$$\frac{5}{\$10.90} = \frac{1}{2.18}$$

Saturday

$$\frac{4}{\$8.56} = \frac{1}{2.14}$$

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

$$3 = \$8.94$$

$$\begin{array}{r} \times 2 \\ \hline 17.88 \end{array}$$

$$6 = \$17.88$$

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?

$$\frac{\$185.08}{7} = \frac{1}{23.58}$$

$$7 \overline{)185.08} \begin{array}{r} 23.58 \\ -14 \\ \hline 45 \\ -42 \\ \hline 38 \\ -35 \\ \hline 38 \\ -35 \\ \hline 38 \\ -35 \\ \hline 38 \end{array}$$

$$3 = \$23.58$$

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. _____