T-MF Math Fundamentals Week 21 2/13

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

<u>Ratio</u> part : part

"proportionality"

ice cream : ~~||||~~ |

pizza : ||||

Fraction: $\frac{\text{ice cream}}{\text{total \# of people}} = \frac{6}{10} = \frac{3}{5}$

Ratio ice cream : pizza

$\frac{6}{2} : \frac{4}{2} = 3:2$

Ratios → Rates unit/time \$/hr mi/hr

Nate ate 192 donuts in 8 hours

donut/hr $192/8$ 24 donuts/hr

Nate committed 36 felonies over a 9 day period.

Rate: felonies/day $\frac{36 \text{ felonies}}{9 \text{ days}} = \frac{4 \text{ felonies}}{\text{day}}$

Proportions

Donuts $\frac{192}{\boxed{8}} = \frac{\boxed{}}{24}$

Hours

$\frac{(192)(24)}{8}$

$\boxed{576 \text{ donuts}}$

Best Sundae

sundae $\frac{\boxed{12}}{72} = \frac{48}{}$ $*4$ $*4$

Reese's cups

$72 * 4 = \boxed{288}$

$\frac{(72)(\cancel{48}^{4})}{\cancel{12}} = \boxed{288}$

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?

$/bottle Monday $\frac{10.90}{5}$ $2.18 Saturday $\frac{8.56}{4}$ $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?

$\frac{\$8.94}{3} = \frac{\quad}{6}$ *2 $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?

$/pound $\frac{\$185.08}{7 \text{ pounds}} = \frac{\$}{3 \text{ pounds}}$ $\frac{3(\$185.08)}{7}$ = $79.32

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?

$\frac{\$30.10}{7}$ = $4.30 Sept $\frac{\$12.99}{3}$ = $4.33 Oct

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?

Blue: $\frac{\$39.96}{3}$ = $13.32 Red $\frac{\$93.59}{7}$ = $13.37

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?

$\frac{\$1.40}{5} = \frac{\quad}{7}$ $\frac{(\$1.40)(7)}{5}$ = $0.28 * 7 = $1.96

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. Monday — $2.18
2. $17.88
3. $79.32
4. Oct – $4.33
5. Blue – $13.32
6. $1.96
7.
8.
9.
10.

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

Solve each problem.

1) The ratio of white chocolate to dark chocolate sold at a candy shop was 5 : 4. If there were 35 bars of white chocolate sold, how many bars of dark chocolate were sold?

white : dark
5 : 4

white : dark
35 : ?

white $\frac{5}{4} = \frac{35}{?}$ *7

$\frac{(4)(35)}{5}$

2) A produce store sold 45 red apples. If the ratio of red apples to green apples sold was 5 : 2, what is the combined amount of red and green apples sold?

$\frac{(2)(45)}{5}$

red : green
5 : 2

red → 5 *9 45 ← red
green → 2 *9 18 ← green

3) A fast food restaurant sells two sizes of fries, small and large. On Friday they sold 81 fries total. If 9 of the fries sold were small, what is the ratio of large fries sold to small fries sold?

small large
9 81 − 9 = 72

small : large
$\frac{9}{9} : \frac{72}{9}$

small : large
1 : 8

4) At a pet store the ratio of cats to dogs sold was 2 : 1. If there were 16 cats that were sold, how many dogs were sold?

cats : dogs *8 cats : dogs
2 : 1 *8 16 : 8

5) During a class election the ratio of students who voted for candidate A compared to candidate B was 7 : 4. If candidate A received 21 votes, what is the combined amount of votes candidate A and candidate B received?

6) A video game had 35 levels in it. If you beat 5 of the levels, what is the ratio of levels left to the levels that have been beaten?

7) Dave was playing checkers with a friend. The ratio of games Dave won was 7 : 2. If Dave won 35 games, how many games did his friend win?

8) A chess player won 72 of the games he played. If his ratio of wins to loses was 9 : 4, how many games did he play total?

9) A small school has 55 students. If 10 of the students are boys, what is the ratio of girls to boys?

10) A buffet offers ranch or caesar dressing. The ratio of ranch dressing used to caesar dressing used is 7 : 1. If the buffet uses 28 cases of ranch dressing, how many cases of caesar do they use?

Answers

1. 28
2. $\frac{(4)(35)}{5}$
3. 45 + 18 = 63
4. 8 : 1
5. 8
6.
7.
8.
9.
10.

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

Reducing Ratios Name:

Reduce each ratio to its lowest form.

Ex) 72 : 56 9 : 7

1) 16 : 56 $\frac{16}{8}$ $\frac{56}{8}$ $\boxed{2:7}$

2) 21 : 56 $\frac{21}{7}$ $\frac{56}{7}$ $\boxed{3:8}$

3:8

3) 10 : 30 _____

4) 63 : 90 _____

5) 20 : 5 _____

6) 72 : 9 _____

7) 20 : 45 _____

8) 15 : 50 _____

9) 28 : 49 _____

10) 10 : 20 _____

11) 2 : 20 _____

12) 10 : 50 _____

13) 36 : 4 _____

14) 70 : 30 _____

15) 14 : 21 _____

16) 6 : 15 _____

17) 20 : 15 _____

18) 50 : 40 _____

19) 63 : 45 _____

20) 30 : 54 _____

Answers

Ex. 9 : 7

1. _____
2. _____
3. _____
4. _____
5. _____
6. _____
7. _____
8. _____
9. _____
10. _____
11. _____
12. _____
13. _____
14. _____
15. _____
16. _____
17. _____
18. _____
19. _____
20. _____

1-10	95	90	85	80	75	70	65	60	55	50
11-20	45	40	35	30	25	20	15	10	5	0