**Solve each problem.**

**Ex)** At the burger shop the ratio of regular sodas sold to diet sodas sold was 3:6. For every _____ diet sodas sold there are _____ regular sodas sold.

**1)** For every 2 males birds in a bird cage there are 5 females. What is the ratio of males to females?

**2)** At the store the ratio of books sold to movies sold was 8:2. For every _____ books sold there were _____ movies sold.

**3)** At the pet store the ratio of dogs to cats was 4:7. For every _____ dogs there are _____ cats.

**4)** During the class election the ratio of votes for Tiffany to votes for Jerry was 4:3. For every _____ votes Jerry got Tiffany got _____.

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

**6)** For every 6 green apples in an orchard there were 9 red apples. What is the ratio of green apples to red apples?

**7)** At the movie theater the ratio of small popcorns sold to large popcorns sold was 5:9. For every _____ large popcorns sold there are _____ small popcorns sold.

**8)** The ratio of pickles to onions on a burger was 2:4. For every _____ pickles there are _____ onions.

**9)** For every 5 cars in a parking lot there are 6 trucks. What is the ratio of cars to trucks in the parking lot?

**10)** At an icecream shop the ratio of chocolate cones sold to vanilla cones cones sold was 4:3. For every _____ vanilla cones sold there were _____ chocolate cones sold.

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

**12)** For every 8 Wii games Janet owned she had 7 PS3 games. What is her ratio of Wii games to PS3 games?

**Answers**

Ex. 6 3

1. _____
2. _____ _____
3. _____ _____
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 | | | | | | | | |

# Identifying True and False Ratio Statements

Name:

**Determine which statement or statements are true. If none write 'none'.**

**1)** diet sodas = 2 , regular sodas = 9

A. The ratio of diet sodas to regular sodas sold is 2:9

B. The ratio of diet sodas to regular sodas sold is 9:2

C. For every 2 diet sodas sold there are 9 regular sodas sold

D. The ratio of regular sodas to diet sodas sold is 9:2

**2)** large popcorns = 6 , small popcorns = 9

A. The ratio of large popcorns to small popcorns sold is 9:6

B. For every 6 large popcorns sold there are 9 small popcorns sold

C. For every 6 small popcorns sold there are 9 large popcorns sold

D. The ratio of small popcorns to large popcorns sold is 9:6

**3)** nails used = 6 , bird houses built = 2

A. The ratio of bird houses built to nails used was 2:6

B. For every 6 nails used there were 2 bird houses built

C. The ratio of nails used to bird houses built was 6:2

D. For every 2 bird houses built there were 6 nails used

**4)** pushups = 4 , sit-ups = 5

A. For every 5 sit-ups done there were 4 pushups done

B. The ratio of pushups done to sit-ups done is 5:4

C. The ratio of sit-ups done to pushups done is 5:4

D. The ratio of pushups done to sit-ups done is 4:5

**5)** texts sent = 8 , calls made = 5

A. The ratio of texts sent to calls made was 8:5

B. The ratio of texts sent to calls made was 5:8

C. For every 5 texts sent there were 8 calls made

D. For every 8 calls made there were 5 texts sent

**6)** cats = 2 , dogs = 8

A. For every 8 cats there are 2 dogs

B. The ratio of cats to dogs is 2:8

C. The ratio of dogs to cats is 8:2

D. The ratio of cats to dogs is 8:2

**Answers**

1. _____
2. _____
3. _____
4. _____
5. _____
6. _____



| | | | | | | |
|---|---|---|---|---|---|---|
| 1-6 | 83 | 67 | 50 | 33 | 17 | 0 |

**Solve each problem.**

**1)** We paid $40 for 8 hamburgers, which is a rate of $___ per hamburger.

**2)** A pencil company used 60 grams of rubber to make 10 pencils, which is a rate of ___ grams per pencil.

**3)** An industrial machine is able to make 9 pens in 3 seconds. What is the rate made per second?

**4)** It took a pet store 10 weeks to sell 80 cats. What is the rate sold per week?

**5)** For every 4 miles Vanessa jogged, Cody jogged 3 miles. If Vanessa jogged 1 miles, how far would Cody have jogged?

**6)** A tailor used 2 meters of string to make 10 Halloween masks. He used ____ of a meter for each mask.

**7)** A machine worked for 5 hours and used 4 kilowatts of electricity. The machine used ____ of a kilowatt each hour it worked.

**8)** A candy company used 8 gallons of syrup to make 4 batches of candy. What is the rate of syrup per batch?

**9)** Oliver earned $12 for mowing 3 lawns. What is the rate earned per lawn mowed?

**10)** A baker used 4 cups of flour to make 5 batches of brownies. He used ____ of a cup of flour to make 1 batch of brownies.

**11)** A computer programmer worked for 10 hours and earned $70, which is a rate of $___ per hour.

**12)** A scientist used 2 gallons of liquid for every 3 hours he works. He uses ____ of a gallon each hour he works.

**13)** A fair owner made 18 dollars when a group of 3 people entered, which is a rate of ___ dollar per person.

**14)** Luke spent 8 days collecting cans and he managed to collect 6 pounds. He collected ____ of a pound each day.

**15)** A jogger travelled 50 kilometers in 5 days. What is the rate he travelled per day?

**Answers**

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



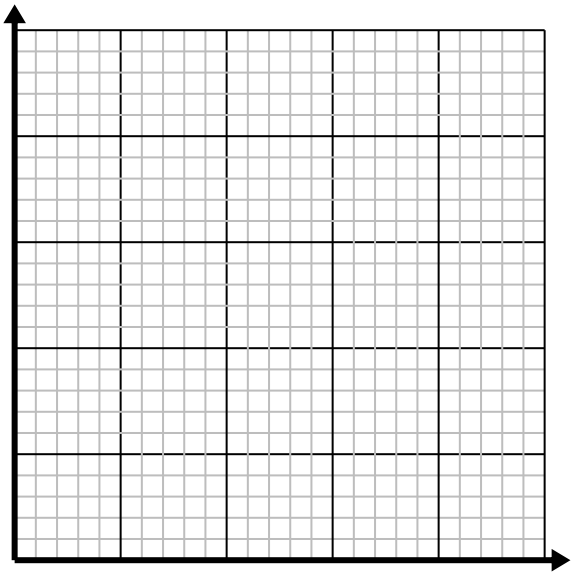
| | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|
| 1-10 | 93 | 87 | 80 | 73 | 67 | 60 | 53 | 47 | 40 | 33 |
| 11-15 | 27 | 20 | 13 | 7 | 0 | | | | | |

**Solve each problem.**

**1)** Every hour Ned walks 2 miles.

Create a table showing the miles travelled over the course of 5 hours, then plot the values on the coordinate plane.

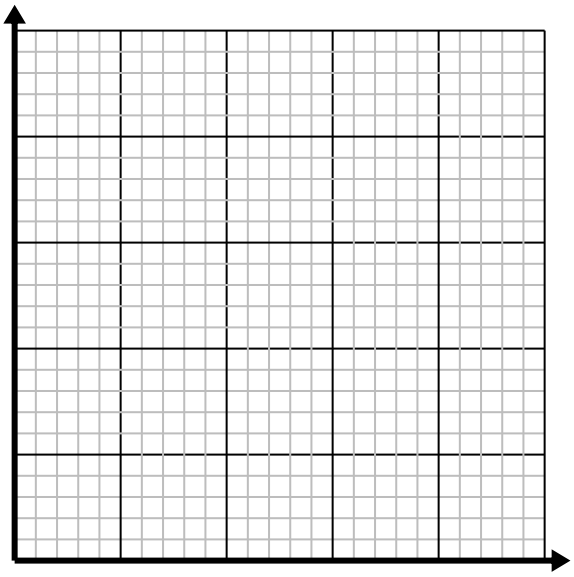
| | | | | | |
|---|---|---|---|---|---|
| | | | | | |
| | | | | | |



**2)** For every cup of flour 5 batches of cookies can be made.

Create a table showing the cups of flour need for up to 5 batches of cookies, then plot the values on the coordinate plane.

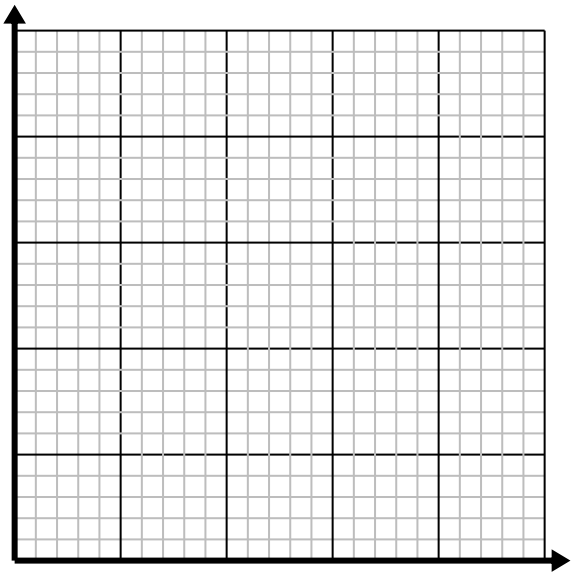
| | | | | | |
|---|---|---|---|---|---|
| | | | | | |
| | | | | | |



**3)** For every shirts made 3 buttons are used.

Create a table showing the buttons needed for making up to 5 shirts, then plot the values on the coordinate plane.

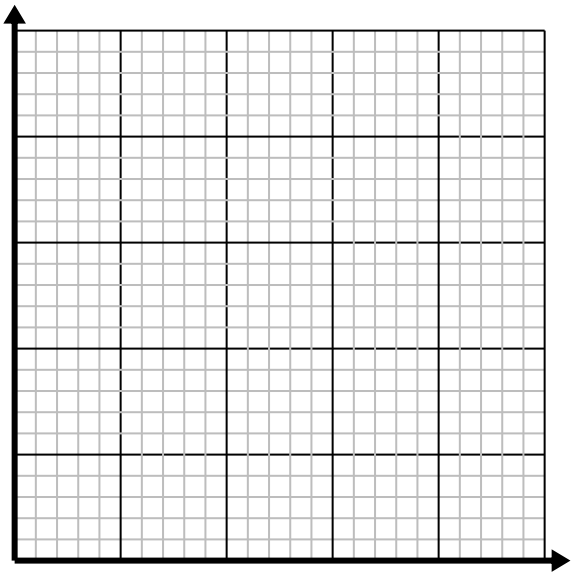
| | | | | | |
|---|---|---|---|---|---|
| | | | | | |
| | | | | | |



**4)** Every box of candy has 2 pieces of candy.

Create a table showing the pieces of candy in up to 5 boxes, then plot the values on the coordinate plane.

| | | | | | |
|---|---|---|---|---|---|
| | | | | | |
| | | | | | |



# Finding Ratios and Unit Rate

Name:

**Find the ratio and unit rate for each problem.**

| | | Ratio | Rate | |
|---|---|---|---|---|
| **Ex)** | 6 boxes can hold 36 books | 36:6 | 6 | books per box |
| **1)** | 75 pints of juice in 5 containers | | | pints per container |
| **2)** | 40 centimeters of snow in 20 hours | | | centimeters per hour |
| **3)** | 32 customers in 4 checkout lanes | | | customers per lane |
| **4)** | 216 cherry pieces in 6 bags of candy | | | pieces per bag |
| **5)** | 120 dollars for mowing 4 lawns | | | dollars per lawn |
| **6)** | 92 dollars for 46 TV channels | | | dollars per channel |
| **7)** | 488 points for defeating 61 enemies | | | points per enemy |
| **8)** | 70 copies in 7 minutes | | | copies per minute |
| **9)** | 96 customers over 3 days | | | customers per day |
| **10)** | 12 pies eaten in 3 minutes | | | pies per minute |
| **11)** | 7 bags with 490 cans | | | cans per bag |
| **12)** | 4 minutes to type 408 words | | | words per minute |
| **13)** | 10 hours to drive 660 miles | | | miles per hour |
| **14)** | 6 trays with 30 ice cubes | | | ice cubes per tray |
| **15)** | 10 CDs with 90 songs | | | songs per CD |

## Answers

| | | |
|---|---|---|
| Ex. | 36:6 | 6 |
| 1. | | |
| 2. | | |
| 3. | | |
| 4. | | |
| 5. | | |
| 6. | | |
| 7. | | |
| 8. | | |
| 9. | | |
| 10. | | |
| 11. | | |
| 12. | | |
| 13. | | |
| 14. | | |
| 15. | | |



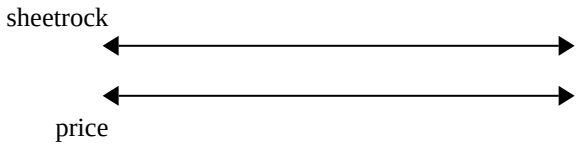
| | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|
| 1-10 | 93 | 87 | 80 | 73 | 67 | 60 | 53 | 47 | 40 | 33 |
| 11-15 | 27 | 20 | 13 | 7 | 0 | | | | | |

# Using Double Numberlines for Ratios

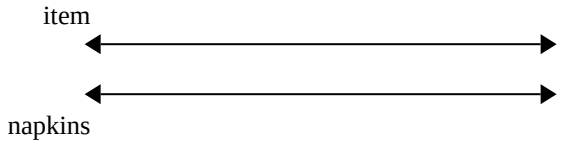
Name:

**Use the double numberline to solve the problems.**

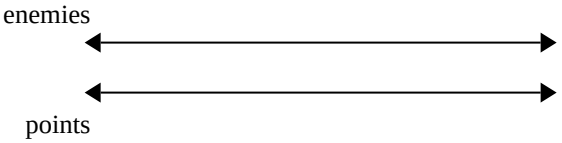
**1)** A builder could get 6 sheets of sheetrock for $9. If he bought 12 sheets, how much money would he have spent?



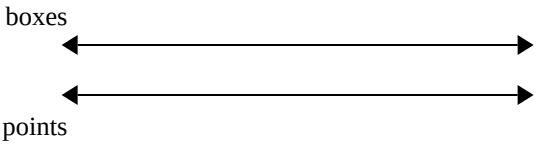

**2)** A sloppy joe restaurant gave 3 napkins for every 7 items ordered. If someone bought 14 items, how many napkins should they get?



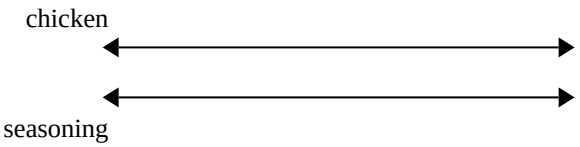

**3)** In a video game for every 6 enemies defeat, you earned 3 points. If you defeated 48 enemies, how many points would you have earned?



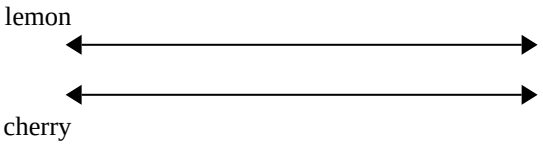

**4)** At a school fundraiser for every 9 boxes of chocolate sold you earn 5 points. If you were to sell 72 boxes, how many points would you have earned?



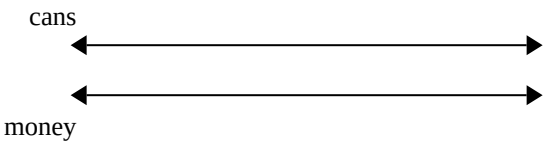

**5)** A recipe call for 5 teaspoons of seasoning for every 6 batches of chicken. If you have 12 batches of chicken, how many teaspoons of seasoning will you need?



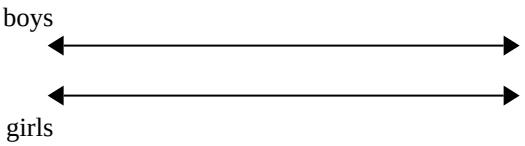

**6)** A box of candy had 4 cherry pieces for every 9 lemon pieces. If the box had 45 lemon pieces, how many cherry pieces would there be?




**7)** For every 6 cans Oliver collected for recycling he earned 9 cents. After he collected 60 cans, how much money would he have earned?




**8)** The ratio of boys to girls at the park was 9 to 6. If there were 45 boys, how many girls were there?




**Answers**

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



| | | | | | | | | |
|---|---|---|---|---|---|---|---|---|
| 1-8 | 88 | 75 | 63 | 50 | 38 | 25 | 13 | 0 |

**Solve each problem.**

**1)** A *book store* was selling 5 books for $27.25. *Online* the you could buy 6 books for $32.16. Which place has a lower unit price?

**2)** At the store beef jerky was $73.70 for 5 pounds. If you bought 7 pounds, how much would it cost?

**3)** In *September* a clothing store had a sale where you could get 3 scarves for $13.35. In *October* the price was changed to 5 scarves for $22.65. On which month did a scarf cost the most?

**4)** At a comic book convention *vendor 1* was selling a set of 5 comics for $53.10. *Vendor 2* was selling a set of 3 comics for $31.71. Which vendor has the higher unit price?

**5)** At the produce store you can buy 4 bags of bananas for $22.52. How much would it cost if you were to buy 2 bags?

**6)** A supermarket had bags of *red* grapes for $27.09 for 7. The also had bags of *green* grapes priced at $14.96 for 4. Which type of grape is most expensive?

**7)** An ice company charged $3.40 for 4 bags of ice. If a convenience store bought 6 bags of ice, how much would it have cost them?

**8)** At the baseball stadium the price for popcorn is $15.36 for 6 bags. If you wanted to buy 2 bags of popcorn, how much would it cost?

**9)** A pet store was selling mice 5 for $8.35. If they ended up selling 2 mice, how much money would they have earned?

**10)** A video game store was getting rid of old games, selling them 3 for $34.26. If they sold 2 games, how much money would they have made?

**Answers**

1. _____
2. _____
3. _____
4. _____
5. _____
6. _____
7. _____
8. _____
9. _____
10. _____



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

**Solve each problem.**

**1)** A classroom had 35 glue sticks. If the ratio of glue sticks to glue bottles was 5 : 2, how many glue bottles did the classroom have?

**2)** A student finished 8 of her homework problems in class. If the ratio of problems she finished to problems she still had left was 4 : 1, how many homework problems did she have total?

**3)** On a Saturday, a library checked out 52 books. If 24 of the books were fiction, what is the ratio of non-fiction books to fiction books checked out?

**4)** A recipe called for the ratio of sugar to flour to be 10 : 3. If you used 70 ounce of sugar, how many ounces of flour would you need to use?

**5)** At a bake sale there were 72 raisin cookies sold. If the ratio of raisin cookies sold to oatmeal cookies sold was 9 : 1, what is the combined amount of raisin and oatmeal cookies sold?

**6)** Kaleb had 136 songs on his MP3 player. If he deleted 56 songs, what is the ratio of songs he kept to songs he deleted?

**7)** The ratio of red cars to blue cars in a parking lot was 5 : 3. If there were 40 red cars, how many blue cars were there?

**8)** A produce store sold 63 red apples. If the ratio of red apples to green apples sold was 7 : 2, what is the combined amount of red and green apples sold?

**9)** For homework, a student had to complete 15 problems total. If she finished 6 problems in class, what is the ratio of problems she still needs to complete to problems that she's already finished?

**10)** At a farm the ratio of cows to horses was 9 : 2. If there were 72 cows at the farm, how many horses were there?

**Answers**

1. _____
2. _____
3. _____
4. _____
5. _____
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)** 50 : 35 10 : 7

**1)** 49 : 21 _____

**2)** 42 : 54 _____

**3)** 12 : 32 _____

**4)** 45 : 20 _____

**5)** 15 : 24 _____

**6)** 12 : 8 _____

**7)** 2 : 16 _____

**8)** 35 : 28 _____

**9)** 20 : 36 _____

**10)** 14 : 63 _____

**11)** 27 : 36 _____

**12)** 70 : 10 _____

**13)** 10 : 60 _____

**14)** 42 : 30 _____

**15)** 48 : 42 _____

**16)** 90 : 10 _____

**17)** 9 : 18 _____

**18)** 5 : 20 _____

**19)** 64 : 72 _____

**20)** 42 : 12 _____

## Answers

Ex. 10 : 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 |

Converting Tables

Name:

**Fill in the blanks in each of the conversion tables.**

**Hint:**
1 Pound = 16 Ounces

| | Pounds | Ounces |
|---|---|---|
| 1) | | 80 |
| 2) | | 128 |
| 3) | 2 | |
| 4) | | 16 |
| 5) | 4 | |

**Hint:**
1 Yard = 3 Feet

| | Yards | Feet |
|---|---|---|
| 6) | | 3 |
| 7) | 4 | |
| 8) | | 6 |
| 9) | 10 | |
| 10) | | 15 |

**Hint:**
1 Hour = 60 Minutes

| | Minutes | Hours |
|---|---|---|
| 11) | | 9 |
| 12) | 240 | |
| 13) | 180 | |
| 14) | | 7 |
| 15) | 60 | |

**Hint:**
1 Pint = 2 Cups

| | Cups | Pints |
|---|---|---|
| 16) | 14 | |
| 17) | | 5 |
| 18) | | 6 |
| 19) | | 4 |
| 20) | 4 | |

**Answers**

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 |

# Converting American Lengths

Name:

**Fill in the blank to make the conversion true.**

**1)** 8 feet = _____ inches

**2)** 5 feet = _____ inches

**3)** 6 feet = _____ inches

**4)** 1 foot = _____ inches

**5)** 2 feet = _____ inches

**6)** 5 yards = _____ feet

**7)** 8 yards = _____ feet

**8)** 2 yards = _____ feet

**9)** 4 yards = _____ feet

**10)** 6 yards = _____ feet

**11)** _____ feet = 10 yards

**12)** _____ feet = 9 yards

**13)** _____ feet = 7 yards

**14)** _____ feet = 3 yards

**15)** _____ feet = 1 yard

**16)** _____ inches = 3 feet

**17)** _____ inches = 4 feet

**18)** _____ inches = 10 feet

**19)** _____ inches = 7 feet

**20)** _____ inches = 9 feet

**Answers**

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 |

**Solve each problem.**

**1)** Every pint is 2 cups. This can be expressed using the equation y × 2 = Z, where y is equal to the number of pints and Z is equal to the total number of cups. Using this equation find the total cups in 7 pints.

**2)** For each pound there are 16 ounces. This can be expressed using the equation y × 16 = Z, where y is equal to the number of pounds and Z is equal to the total number of ounces. Using this equation find the total ounces in 3 pounds.

**3)** Every gallon is 4 quarts. This can be expressed using the equation y × 4 = Z, where y is equal to the number of gallons and Z is equal to the total number of quarts. Using this equation find the total quarts in 6 gallons.

**4)** Every quarter is 5 nickels. This can be expressed using the equation y × 5 = Z, where y is equal to the number of quarters and Z is equal to the total number of nickels. Using this equation find the total nickels in 7 quarters.

**5)** Every quart is 2 pints. This can be expressed using the equation y × 2 = Z, where y is equal to the number of quarts and Z is equal to the total number of pints. Using this equation find the total pints in 10 quarts.

**6)** Every yard is 3 feet. This can be expressed using the equation y × 3 = Z, where y is equal to the number of yards and Z is equal to the total number of feet. Using this equation find the total feet in 7 yards.

**7)** Every liter is 1,000 milliliters. This can be expressed using the equation y × 1,000 = Z, where y is equal to the number of liters and Z is equal to the total number of milliliters. Using this equation find the total milliliters in 6 liters.

**8)** Every kilometer is 1,000 meters. This can be expressed using the equation y × 1,000 = Z, where y is equal to the number of kilometers and Z is equal to the total number of meters. Using this equation find the total meters in 10 kilometers.

**9)** Every centimeter is 10 millimeters. This can be expressed using the equation y × 10 = Z, where y is equal to the number of centimeters and Z is equal to the total number of millimeters. Using this equation find the total millimeters in 4 centimeters.

**10)** Every quarter is 25 pennies. This can be expressed using the equation y × 25 = Z, where y is equal to the number of quarters and Z is equal to the total number of pennies. Using this equation find the total pennies in 7 quarters.

**11)** Every dollar is 4 quarters. This can be expressed using the equation y × 4 = Z, where y is equal to the number of dollars and Z is equal to the total number of quarters. Using this equation find the total quarters in 8 dollars.

**12)** Every cup is 8 ounces. This can be expressed using the equation y × 8 = Z, where y is equal to the number of cups and Z is equal to the total number of ounces. Using this equation find the total ounces in 4 cups.

**Answers**

1. _____
2. _____
3. _____
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 | | | | | | | | |