Solve each problem.

1) Every quart is 2 pints. Write an equation to express the total number of pints \((Z)\) in \((y)\) quarts.

\[ y \cdot 2 = Z \]

2) Every cup is 8 ounces. Write an equation to express the total number of ounces \((Z)\) in \((y)\) cups.

\[ y \cdot 8 = Z \]

3) Every liter is 1,000 milliliters. Write an equation to express the total number of milliliters \((Z)\) in \((y)\) liters.

\[ y \cdot 1,000 = Z \]

4) For each pound there are 16 ounces. Write an equation to express the total number of ounces \((Z)\) in \((y)\) pounds.

\[ y \cdot 16 = Z \]

5) Every yard is 3 feet. Write an equation to express the total number of feet \((Z)\) in \((y)\) yards.

\[ y \cdot 3 = Z \]

6) Every foot is 12 inches. Write an equation to express the total number of inches \((Z)\) in \((y)\) feet.

\[ y \cdot 12 = Z \]

7) Every quarter is 5 nickels. Write an equation to express the total number of nickels \((Z)\) in \((y)\) quarters.

\[ y \cdot 5 = Z \]

8) Every dollar is 100 pennies. Write an equation to express the total number of pennies \((Z)\) in \((y)\) dollars.

\[ y \cdot 100 = Z \]

9) Every centimeter is 10 millimeters. Write an equation to express the total number of millimeters \((Z)\) in \((y)\) centimeters.

\[ y \cdot 10 = Z \]

10) Every kilometer is 1,000 meters. Write an equation to express the total number of meters \((Z)\) in \((y)\) kilometers.

\[ y \cdot 1,000 = Z \]

11) Every pint is 2 cups. Write an equation to express the total number of cups \((Z)\) in \((y)\) pints.

\[ y \cdot 2 = Z \]

12) Every dollar is 10 dimes. Write an equation to express the total number of dimes \((Z)\) in \((y)\) dollars.

\[ y \cdot 10 = Z \]

13) Every dollar is 4 quarters. Write an equation to express the total number of quarters \((Z)\) in \((y)\) dollars.

\[ y \cdot 4 = Z \]

14) For each kilogram there are 1,000 grams. Write an equation to express the total number of grams \((Z)\) in \((y)\) kilograms.

\[ y \cdot 1,000 = Z \]

15) Every quarter is 25 pennies. Write an equation to express the total number of pennies \((Z)\) in \((y)\) quarters.

\[ y \cdot 25 = Z \]
Solve each problem.

1) Every quart is 2 pints. Write an equation to express the total number of pints \( Z \) in (y) quarts.
   
   \[ y \cdot 2 = Z \]

2) Every cup is 8 ounces. Write an equation to express the total number of ounces \( Z \) in (y) cups.
   
   \[ y \cdot 8 = Z \]

3) Every liter is 1,000 milliliters. Write an equation to express the total number of milliliters \( Z \) in (y) liters.
   
   \[ y \cdot 1,000 = Z \]

4) For each pound there are 16 ounces. Write an equation to express the total number of ounces \( Z \) in (y) pounds.
   
   \[ y \cdot 16 = Z \]

5) Every yard is 3 feet. Write an equation to express the total number of feet \( Z \) in (y) yards.
   
   \[ y \cdot 3 = Z \]

6) Every foot is 12 inches. Write an equation to express the total number of inches \( Z \) in (y) feet.
   
   \[ y \cdot 12 = Z \]

7) Every quarter is 5 nickels. Write an equation to express the total number of nickels \( Z \) in (y) quarters.
   
   \[ y \cdot 5 = Z \]

8) Every dollar is 100 pennies. Write an equation to express the total number of pennies \( Z \) in (y) dollars.
   
   \[ y \cdot 100 = Z \]

9) Every centimeter is 10 millimeters. Write an equation to express the total number of millimeters \( Z \) in (y) centimeters.
   
   \[ y \cdot 10 = Z \]

10) Every kilometer is 1,000 meters. Write an equation to express the total number of meters \( Z \) in (y) kilometers.
    
    \[ y \cdot 1,000 = Z \]

11) Every pint is 2 cups. Write an equation to express the total number of cups \( Z \) in (y) pints.
    
    \[ y \cdot 2 = Z \]

12) Every dollar is 10 dimes. Write an equation to express the total number of dimes \( Z \) in (y) dollars.
    
    \[ y \cdot 10 = Z \]

13) Every dollar is 4 quarters. Write an equation to express the total number of quarters \( Z \) in (y) dollars.
    
    \[ y \cdot 4 = Z \]

14) For each kilogram there are 1,000 grams. Write an equation to express the total number of grams \( Z \) in (y) kilograms.
    
    \[ y \cdot 1,000 = Z \]

15) Every quarter is 25 pennies. Write an equation to express the total number of pennies \( Z \) in (y) quarters.
    
    \[ y \cdot 25 = Z \]
Solve each problem.

1) For each pound there are 16 ounces. Write an equation to express the total number of ounces (Z) in (y) pounds.
   \[ y \times 16 = Z \]

2) Every quarter is 25 pennies. Write an equation to express the total number of pennies (Z) in (y) quarters.
   \[ y \times 25 = Z \]

3) Every meter is 100 centimeters. Write an equation to express the total number of centimeters (Z) in (y) meters.
   \[ y \times 100 = Z \]

4) Every yard is 3 feet. Write an equation to express the total number of feet (Z) in (y) yards.
   \[ y \times 3 = Z \]

5) Every gallon is 4 quarts. Write an equation to express the total number of quarts (Z) in (y) gallons.
   \[ y \times 4 = Z \]

6) Every quarter is 5 nickels. Write an equation to express the total number of nickels (Z) in (y) quarters.
   \[ y \times 5 = Z \]

7) Every foot is 12 inches. Write an equation to express the total number of inches (Z) in (y) feet.
   \[ y \times 12 = Z \]

8) Every cup is 8 ounces. Write an equation to express the total number of ounces (Z) in (y) cups.
   \[ y \times 8 = Z \]

9) For each kilogram there are 1,000 grams. Write an equation to express the total number of grams (Z) in (y) kilograms.
   \[ y \times 1,000 = Z \]

10) Every dollar is 4 quarters. Write an equation to express the total number of quarters (Z) in (y) dollars.
    \[ y \times 4 = Z \]

11) Every centimeter is 10 millimeters. Write an equation to express the total number of millimeters (Z) in (y) centimeters.
    \[ y \times 10 = Z \]

12) Every dollar is 100 pennies. Write an equation to express the total number of pennies (Z) in (y) dollars.
    \[ y \times 100 = Z \]

13) Every liter is 1,000 milliliters. Write an equation to express the total number of milliliters (Z) in (y) liters.
    \[ y \times 1,000 = Z \]

14) Every pint is 2 cups. Write an equation to express the total number of cups (Z) in (y) pints.
    \[ y \times 2 = Z \]

15) Every dollar is 10 dimes. Write an equation to express the total number of dimes (Z) in (y) dollars.
    \[ y \times 10 = Z \]
Solve each problem.

1) For each pound there are 16 ounces. Write an equation to express the total number of ounces ($Z$) in ($y$) pounds.

2) Every quarter is 25 pennies. Write an equation to express the total number of pennies ($Z$) in ($y$) quarters.

3) Every meter is 100 centimeters. Write an equation to express the total number of centimeters ($Z$) in ($y$) meters.

4) Every yard is 3 feet. Write an equation to express the total number of feet ($Z$) in ($y$) yards.

5) Every gallon is 4 quarts. Write an equation to express the total number of quarts ($Z$) in ($y$) gallons.

6) Every quarter is 5 nickels. Write an equation to express the total number of nickels ($Z$) in ($y$) quarters.

7) Every foot is 12 inches. Write an equation to express the total number of inches ($Z$) in ($y$) feet.

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9) For each kilogram there are 1,000 grams. Write an equation to express the total number of grams ($Z$) in ($y$) kilograms.

10) Every dollar is 4 quarters. Write an equation to express the total number of quarters ($Z$) in ($y$) dollars.

11) Every centimeter is 10 millimeters. Write an equation to express the total number of millimeters ($Z$) in ($y$) centimeters.

12) Every dollar is 100 pennies. Write an equation to express the total number of pennies ($Z$) in ($y$) dollars.

13) Every liter is 1,000 milliliters. Write an equation to express the total number of milliliters ($Z$) in ($y$) liters.

14) Every pint is 2 cups. Write an equation to express the total number of cups ($Z$) in ($y$) pints.

15) Every dollar is 10 dimes. Write an equation to express the total number of dimes ($Z$) in ($y$) dollars.

Answers

1. $y \cdot 16 = Z$
2. $y \cdot 25 = Z$
3. $y \cdot 100 = Z$
4. $y \cdot 3 = Z$
5. $y \cdot 4 = Z$
6. $y \cdot 5 = Z$
7. $y \cdot 12 = Z$
8. $y \cdot 8 = Z$
9. $y \cdot 1,000 = Z$
10. $y \cdot 4 = Z$
11. $y \cdot 10 = Z$
12. $y \cdot 100 = Z$
13. $y \cdot 1,000 = Z$
14. $y \cdot 2 = Z$
15. $y \cdot 10 = Z$
Solve each problem.

1) Every yard is 3 feet. Write an equation to express the total number of feet (Z) in (y) yards.

2) Every dollar is 4 quarters. Write an equation to express the total number of quarters (Z) in (y) dollars.

3) Every quart is 2 pints. Write an equation to express the total number of pints (Z) in (y) quarts.

4) Every kilometer is 1,000 meters. Write an equation to express the total number of meters (Z) in (y) kilometers.

5) Every pint is 2 cups. Write an equation to express the total number of cups (Z) in (y) pints.

6) Every foot is 12 inches. Write an equation to express the total number of inches (Z) in (y) feet.

7) Every gallon is 4 quarts. Write an equation to express the total number of quarts (Z) in (y) gallons.

8) Every meter is 100 centimeters. Write an equation to express the total number of centimeters (Z) in (y) meters.

9) Every quarter is 25 pennies. Write an equation to express the total number of pennies (Z) in (y) quarters.

10) Every quarter is 5 nickels. Write an equation to express the total number of nickels (Z) in (y) quarters.

11) For each pound there are 16 ounces. Write an equation to express the total number of ounces (Z) in (y) pounds.

12) Every dollar is 10 dimes. Write an equation to express the total number of dimes (Z) in (y) dollars.

13) Every cup is 8 ounces. Write an equation to express the total number of ounces (Z) in (y) cups.

14) For each kilogram there are 1,000 grams. Write an equation to express the total number of grams (Z) in (y) kilograms.

15) Every centimeter is 10 millimeters. Write an equation to express the total number of millimeters (Z) in (y) centimeters.
Solve each problem.

1) Every yard is 3 feet. Write an equation to express the total number of feet (Z) in (y) yards. 
   \[ y \cdot 3 = Z \]

2) Every dollar is 4 quarters. Write an equation to express the total number of quarters (Z) in (y) dollars. 
   \[ y \cdot 4 = Z \]

3) Every quart is 2 pints. Write an equation to express the total number of pints (Z) in (y) quarts. 
   \[ y \cdot 2 = Z \]

4) Every kilometer is 1,000 meters. Write an equation to express the total number of meters (Z) in (y) kilometers. 
   \[ y \cdot 1,000 = Z \]

5) Every pint is 2 cups. Write an equation to express the total number of cups (Z) in (y) pints. 
   \[ y \cdot 2 = Z \]

6) Every foot is 12 inches. Write an equation to express the total number of inches (Z) in (y) feet. 
   \[ y \cdot 12 = Z \]

7) Every gallon is 4 quarts. Write an equation to express the total number of quarts (Z) in (y) gallons. 
   \[ y \cdot 4 = Z \]

8) Every meter is 100 centimeters. Write an equation to express the total number of centimeters (Z) in (y) meters. 
   \[ y \cdot 100 = Z \]

9) Every quarter is 25 pennies. Write an equation to express the total number of pennies (Z) in (y) quarters. 
   \[ y \cdot 25 = Z \]

10) Every quarter is 5 nickels. Write an equation to express the total number of nickels (Z) in (y) quarters. 
    \[ y \cdot 5 = Z \]

11) For each pound there are 16 ounces. Write an equation to express the total number of ounces (Z) in (y) pounds. 
    \[ y \cdot 16 = Z \]

12) Every dollar is 10 dimes. Write an equation to express the total number of dimes (Z) in (y) dollars. 
    \[ y \cdot 10 = Z \]

13) Every cup is 8 ounces. Write an equation to express the total number of ounces (Z) in (y) cups. 
    \[ y \cdot 8 = Z \]

14) For each kilogram there are 1,000 grams. Write an equation to express the total number of grams (Z) in (y) kilograms. 
    \[ y \cdot 1,000 = Z \]

15) Every centimeter is 10 millimeters. Write an equation to express the total number of millimeters (Z) in (y) centimeters. 
    \[ y \cdot 10 = Z \]
Solve each problem.

1) For each kilogram there are 1,000 grams. Write an equation to express the total number of grams (Z) in (y) kilograms.

\[ y \times 1,000 = Z \]

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\[ y \times 12 = Z \]

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\[ y \times 4 = Z \]

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\[ y \times 8 = Z \]

6) For each pound there are 16 ounces. Write an equation to express the total number of ounces (Z) in (y) pounds.

\[ y \times 16 = Z \]

7) Every yard is 3 feet. Write an equation to express the total number of feet (Z) in (y) yards.

\[ y \times 3 = Z \]

8) Every liter is 1,000 milliliters. Write an equation to express the total number of milliliters (Z) in (y) liters.

\[ y \times 1,000 = Z \]

9) Every pint is 2 cups. Write an equation to express the total number of cups (Z) in (y) pints.

\[ y \times 2 = Z \]

10) Every centimeter is 10 millimeters. Write an equation to express the total number of millimeters (Z) in (y) centimeters.

\[ y \times 10 = Z \]

11) Every dollar is 10 dimes. Write an equation to express the total number of dimes (Z) in (y) dollars.

\[ y \times 10 = Z \]

12) Every meter is 100 centimeters. Write an equation to express the total number of centimeters (Z) in (y) meters.

\[ y \times 100 = Z \]

13) Every quart is 2 pints. Write an equation to express the total number of pints (Z) in (y) quarts.

\[ y \times 2 = Z \]

14) Every dollar is 4 quarters. Write an equation to express the total number of quarters (Z) in (y) dollars.

\[ y \times 4 = Z \]

15) Every quarter is 25 pennies. Write an equation to express the total number of pennies (Z) in (y) quarters.

\[ y \times 25 = Z \]
Solve each problem.

1) For each kilogram there are 1,000 grams. Write an equation to express the total number of grams (Z) in (y) kilograms.

2) Every quarter is 5 nickels. Write an equation to express the total number of nickels (Z) in (y) quarters.

3) Every foot is 12 inches. Write an equation to express the total number of inches (Z) in (y) feet.

4) Every gallon is 4 quarts. Write an equation to express the total number of quarts (Z) in (y) gallons.

5) Every cup is 8 ounces. Write an equation to express the total number of ounces (Z) in (y) cups.

6) For each pound there are 16 ounces. Write an equation to express the total number of ounces (Z) in (y) pounds.

7) Every yard is 3 feet. Write an equation to express the total number of feet (Z) in (y) yards.

8) Every liter is 1,000 milliliters. Write an equation to express the total number of milliliters (Z) in (y) liters.

9) Every pint is 2 cups. Write an equation to express the total number of cups (Z) in (y) pints.

10) Every centimeter is 10 millimeters. Write an equation to express the total number of millimeters (Z) in (y) centimeters.

11) Every dollar is 10 dimes. Write an equation to express the total number of dimes (Z) in (y) dollars.

12) Every meter is 100 centimeters. Write an equation to express the total number of centimeters (Z) in (y) meters.

13) Every quart is 2 pints. Write an equation to express the total number of pints (Z) in (y) quarts.

14) Every dollar is 4 quarters. Write an equation to express the total number of quarters (Z) in (y) dollars.

15) Every quarter is 25 pennies. Write an equation to express the total number of pennies (Z) in (y) quarters.
Solve each problem.

1) Every gallon is 4 quarts. Write an equation to express the total number of quarts (Z) in (y) gallons.

2) Every quarter is 25 pennies. Write an equation to express the total number of pennies (Z) in (y) quarters.

3) Every pint is 2 cups. Write an equation to express the total number of cups (Z) in (y) pints.

4) Every centimeter is 10 millimeters. Write an equation to express the total number of millimeters (Z) in (y) centimeters.

5) Every quart is 2 pints. Write an equation to express the total number of pints (Z) in (y) quarts.

6) For each kilogram there are 1,000 grams. Write an equation to express the total number of grams (Z) in (y) kilograms.

7) Every foot is 12 inches. Write an equation to express the total number of inches (Z) in (y) feet.

8) For each pound there are 16 ounces. Write an equation to express the total number of ounces (Z) in (y) pounds.

9) Every meter is 100 centimeters. Write an equation to express the total number of centimeters (Z) in (y) meters.

10) Every liter is 1,000 milliliters. Write an equation to express the total number of milliliters (Z) in (y) liters.

11) Every dollar is 10 dimes. Write an equation to express the total number of dimes (Z) in (y) dollars.

12) Every cup is 8 ounces. Write an equation to express the total number of ounces (Z) in (y) cups.

13) Every yard is 3 feet. Write an equation to express the total number of feet (Z) in (y) yards.

14) Every dollar is 4 quarters. Write an equation to express the total number of quarters (Z) in (y) dollars.

15) Every dollar is 100 pennies. Write an equation to express the total number of pennies (Z) in (y) dollars.

Answers

1. ____________________
2. ____________________
3. ____________________
4. ____________________
5. ____________________
6. ____________________
7. ____________________
8. ____________________
9. ____________________
10. ____________________
11. ____________________
12. ____________________
13. ____________________
14. ____________________
15. ____________________
Solve each problem.

1) Every gallon is 4 quarts. Write an equation to express the total number of quarts \((Z)\) in \((y)\) gallons.

\[y \cdot 4 = Z\]

2) Every quarter is 25 pennies. Write an equation to express the total number of pennies \((Z)\) in \((y)\) quarters.

\[y \cdot 25 = Z\]

3) Every pint is 2 cups. Write an equation to express the total number of cups \((Z)\) in \((y)\) pints.

\[y \cdot 2 = Z\]

4) Every centimeter is 10 millimeters. Write an equation to express the total number of millimeters \((Z)\) in \((y)\) centimeters.

\[y \cdot 10 = Z\]

5) Every quart is 2 pints. Write an equation to express the total number of pints \((Z)\) in \((y)\) quarts.

\[y \cdot 2 = Z\]

6) For each kilogram there are 1,000 grams. Write an equation to express the total number of grams \((Z)\) in \((y)\) kilograms.

\[y \cdot 1,000 = Z\]

7) Every foot is 12 inches. Write an equation to express the total number of inches \((Z)\) in \((y)\) feet.

\[y \cdot 12 = Z\]

8) For each pound there are 16 ounces. Write an equation to express the total number of ounces \((Z)\) in \((y)\) pounds.

\[y \cdot 16 = Z\]

9) Every meter is 100 centimeters. Write an equation to express the total number of centimeters \((Z)\) in \((y)\) meters.

\[y \cdot 100 = Z\]

10) Every liter is 1,000 milliliters. Write an equation to express the total number of milliliters \((Z)\) in \((y)\) liters.

\[y \cdot 1,000 = Z\]

11) Every dollar is 10 dimes. Write an equation to express the total number of dimes \((Z)\) in \((y)\) dollars.

\[y \cdot 10 = Z\]

12) Every cup is 8 ounces. Write an equation to express the total number of ounces \((Z)\) in \((y)\) cups.

\[y \cdot 8 = Z\]

13) Every yard is 3 feet. Write an equation to express the total number of feet \((Z)\) in \((y)\) yards.

\[y \cdot 3 = Z\]

14) Every dollar is 4 quarters. Write an equation to express the total number of quarters \((Z)\) in \((y)\) dollars.

\[y \cdot 4 = Z\]

15) Every dollar is 100 pennies. Write an equation to express the total number of pennies \((Z)\) in \((y)\) dollars.

\[y \cdot 100 = Z\]
Solve each problem.

1) Every foot is 12 inches. Write an equation to express the total number of inches (Z) in (y) feet.

2) Every meter is 100 centimeters. Write an equation to express the total number of centimeters (Z) in (y) meters.

3) Every dollar is 100 pennies. Write an equation to express the total number of pennies (Z) in (y) dollars.

4) Every liter is 1,000 milliliters. Write an equation to express the total number of milliliters (Z) in (y) liters.

5) For each kilogram there are 1,000 grams. Write an equation to express the total number of grams (Z) in (y) kilograms.

6) Every pint is 2 cups. Write an equation to express the total number of cups (Z) in (y) pints.

7) Every cup is 8 ounces. Write an equation to express the total number of ounces (Z) in (y) cups.

8) Every dollar is 10 dimes. Write an equation to express the total number of dimes (Z) in (y) dollars.

9) Every centimeter is 10 millimeters. Write an equation to express the total number of millimeters (Z) in (y) centimeters.

10) Every kilometer is 1,000 meters. Write an equation to express the total number of meters (Z) in (y) kilometers.

11) For each pound there are 16 ounces. Write an equation to express the total number of ounces (Z) in (y) pounds.

12) Every dollar is 4 quarters. Write an equation to express the total number of quarters (Z) in (y) dollars.

13) Every quarter is 25 pennies. Write an equation to express the total number of pennies (Z) in (y) quarters.

14) Every gallon is 4 quarts. Write an equation to express the total number of quarts (Z) in (y) gallons.

15) Every quart is 2 pints. Write an equation to express the total number of pints (Z) in (y) quarts.

1. \( y \cdot 12 = Z \)

2. \( y \cdot 100 = Z \)

3. \( y \cdot 100 = Z \)

4. \( y \cdot 1,000 = Z \)

5. \( y \cdot 1,000 = Z \)

6. \( y \cdot 2 = Z \)

7. \( y \cdot 8 = Z \)

8. \( y \cdot 10 = Z \)

9. \( y \cdot 10 = Z \)

10. \( y \cdot 1,000 = Z \)

11. \( y \cdot 16 = Z \)

12. \( y \cdot 4 = Z \)

13. \( y \cdot 25 = Z \)

14. \( y \cdot 4 = Z \)

15. \( y \cdot 2 = Z \)
1) Every foot is 12 inches. Write an equation to express the total number of inches (Z) in (y) feet.

\[ y \cdot 12 = Z \]

2) Every meter is 100 centimeters. Write an equation to express the total number of centimeters (Z) in (y) meters.

\[ y \cdot 100 = Z \]

3) Every dollar is 100 pennies. Write an equation to express the total number of pennies (Z) in (y) dollars.

\[ y \cdot 100 = Z \]

4) Every liter is 1,000 milliliters. Write an equation to express the total number of milliliters (Z) in (y) liters.

\[ y \cdot 1,000 = Z \]

5) For each kilogram there are 1,000 grams. Write an equation to express the total number of grams (Z) in (y) kilograms.

\[ y \cdot 1,000 = Z \]

6) Every pint is 2 cups. Write an equation to express the total number of cups (Z) in (y) pints.

\[ y \cdot 2 = Z \]

7) Every cup is 8 ounces. Write an equation to express the total number of ounces (Z) in (y) cups.

\[ y \cdot 8 = Z \]

8) Every dollar is 10 dimes. Write an equation to express the total number of dimes (Z) in (y) dollars.

\[ y \cdot 10 = Z \]

9) Every centimeter is 10 millimeters. Write an equation to express the total number of millimeters (Z) in (y) centimeters.

\[ y \cdot 10 = Z \]

10) Every kilometer is 1,000 meters. Write an equation to express the total number of meters (Z) in (y) kilometers.

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\[ y \cdot 25 = Z \]

14) Every gallon is 4 quarts. Write an equation to express the total number of quarts (Z) in (y) gallons.

\[ y \cdot 4 = Z \]

15) Every quart is 2 pints. Write an equation to express the total number of pints (Z) in (y) quarts.

\[ y \cdot 2 = Z \]
Solve each problem.

1) Every gallon is 4 quarts. Write an equation to express the total number of quarts \( (Z) \) in \( (y) \) gallons.

\[
y \cdot 4 = Z
\]

2) Every dollar is 10 dimes. Write an equation to express the total number of dimes \( (Z) \) in \( (y) \) dollars.

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y \cdot 10 = Z
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5) Every kilometer is 1,000 meters. Write an equation to express the total number of meters \( (Z) \) in \( (y) \) kilometers.

\[
y \cdot 1,000 = Z
\]

6) Every cup is 8 ounces. Write an equation to express the total number of ounces \( (Z) \) in \( (y) \) cups.

\[
y \cdot 8 = Z
\]

7) Every quart is 2 pints. Write an equation to express the total number of pints \( (Z) \) in \( (y) \) quarts.

\[
y \cdot 2 = Z
\]

8) Every meter is 100 centimeters. Write an equation to express the total number of centimeters \( (Z) \) in \( (y) \) meters.

\[
y \cdot 100 = Z
\]

9) Every pint is 2 cups. Write an equation to express the total number of cups \( (Z) \) in \( (y) \) pints.

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y \cdot 2 = Z
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y \cdot 12 = Z
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y \cdot 1,000 = Z
\]

14) Every liter is 1,000 milliliters. Write an equation to express the total number of milliliters \( (Z) \) in \( (y) \) liters.

\[
y \cdot 1,000 = Z
\]

15) Every yard is 3 feet. Write an equation to express the total number of feet \( (Z) \) in \( (y) \) yards.

\[
y \cdot 3 = Z
\]
## Writing Equations from Ratios

### Solve each problem.

1. Every gallon is 4 quarts. Write an equation to express the total number of quarts ($Z$) in ($y$) gallons.
   
   $y \cdot 4 = Z$

2. Every dollar is 10 dimes. Write an equation to express the total number of dimes ($Z$) in ($y$) dollars.
   
   $y \cdot 10 = Z$

3. For each pound there are 16 ounces. Write an equation to express the total number of ounces ($Z$) in ($y$) pounds.
   
   $y \cdot 16 = Z$

4. Every centimeter is 10 millimeters. Write an equation to express the total number of millimeters ($Z$) in ($y$) centimeters.
   
   $y \cdot 10 = Z$

5. Every kilometer is 1,000 meters. Write an equation to express the total number of meters ($Z$) in ($y$) kilometers.
   
   $y \cdot 1,000 = Z$

6. Every cup is 8 ounces. Write an equation to express the total number of ounces ($Z$) in ($y$) cups.
   
   $y \cdot 8 = Z$

7. Every quart is 2 pints. Write an equation to express the total number of pints ($Z$) in ($y$) quarts.
   
   $y \cdot 2 = Z$

8. Every meter is 100 centimeters. Write an equation to express the total number of centimeters ($Z$) in ($y$) meters.
   
   $y \cdot 100 = Z$

9. Every pint is 2 cups. Write an equation to express the total number of cups ($Z$) in ($y$) pints.
   
   $y \cdot 2 = Z$

10. Every foot is 12 inches. Write an equation to express the total number of inches ($Z$) in ($y$) feet.
    
    $y \cdot 12 = Z$

11. Every quarter is 5 nickels. Write an equation to express the total number of nickels ($Z$) in ($y$) quarters.
    
    $y \cdot 5 = Z$

12. Every quarter is 25 pennies. Write an equation to express the total number of pennies ($Z$) in ($y$) quarters.
    
    $y \cdot 25 = Z$

13. For each kilogram there are 1,000 grams. Write an equation to express the total number of grams ($Z$) in ($y$) kilograms.
    
    $y \cdot 1,000 = Z$

14. Every liter is 1,000 milliliters. Write an equation to express the total number of milliliters ($Z$) in ($y$) liters.
    
    $y \cdot 1,000 = Z$

15. Every yard is 3 feet. Write an equation to express the total number of feet ($Z$) in ($y$) yards.
    
    $y \cdot 3 = Z$
Solve each problem.

1) Every cup is 8 ounces. Write an equation to express the total number of ounces (Z) in (y) cups.
   \[ y \times 8 = Z \]

2) Every quarter is 5 nickels. Write an equation to express the total number of nickels (Z) in (y) quarters.
   \[ y \times 5 = Z \]

3) Every quart is 2 pints. Write an equation to express the total number of pints (Z) in (y) quarts.
   \[ y \times 2 = Z \]

4) Every dollar is 10 dimes. Write an equation to express the total number of dimes (Z) in (y) dollars.
   \[ y \times 10 = Z \]

5) Every kilometer is 1,000 meters. Write an equation to express the total number of meters (Z) in (y) kilometers.
   \[ y \times 1,000 = Z \]

6) Every liter is 1,000 milliliters. Write an equation to express the total number of milliliters (Z) in (y) liters.
   \[ y \times 1,000 = Z \]

7) Every foot is 12 inches. Write an equation to express the total number of inches (Z) in (y) feet.
   \[ y \times 12 = Z \]

8) For each pound there are 16 ounces. Write an equation to express the total number of ounces (Z) in (y) pounds.
   \[ y \times 16 = Z \]

9) For each kilogram there are 1,000 grams. Write an equation to express the total number of grams (Z) in (y) kilograms.
   \[ y \times 1,000 = Z \]

10) Every yard is 3 feet. Write an equation to express the total number of feet (Z) in (y) yards.
    \[ y \times 3 = Z \]

11) Every pint is 2 cups. Write an equation to express the total number of cups (Z) in (y) pints.
    \[ y \times 2 = Z \]

12) Every quarter is 25 pennies. Write an equation to express the total number of pennies (Z) in (y) quarters.
    \[ y \times 25 = Z \]

13) Every meter is 100 centimeters. Write an equation to express the total number of centimeters (Z) in (y) meters.
    \[ y \times 100 = Z \]

14) Every gallon is 4 quarts. Write an equation to express the total number of quarts (Z) in (y) gallons.
    \[ y \times 4 = Z \]

15) Every dollar is 100 pennies. Write an equation to express the total number of pennies (Z) in (y) dollars.
    \[ y \times 100 = Z \]
### Solve each problem.

1) Every cup is 8 ounces. Write an equation to express the total number of ounces \( Z \) in \( y \) cups.

2) Every quarter is 5 nickels. Write an equation to express the total number of nickels \( Z \) in \( y \) quarters.

3) Every quart is 2 pints. Write an equation to express the total number of pints \( Z \) in \( y \) quarts.

4) Every dollar is 10 dimes. Write an equation to express the total number of dimes \( Z \) in \( y \) dollars.

5) Every kilometer is 1,000 meters. Write an equation to express the total number of meters \( Z \) in \( y \) kilometers.

6) Every liter is 1,000 milliliters. Write an equation to express the total number of milliliters \( Z \) in \( y \) liters.

7) Every foot is 12 inches. Write an equation to express the total number of inches \( Z \) in \( y \) feet.

8) For each pound there are 16 ounces. Write an equation to express the total number of ounces \( Z \) in \( y \) pounds.

9) For each kilogram there are 1,000 grams. Write an equation to express the total number of grams \( Z \) in \( y \) kilograms.

10) Every yard is 3 feet. Write an equation to express the total number of feet \( Z \) in \( y \) yards.

11) Every pint is 2 cups. Write an equation to express the total number of cups \( Z \) in \( y \) pints.

12) Every quarter is 25 pennies. Write an equation to express the total number of pennies \( Z \) in \( y \) quarters.

13) Every meter is 100 centimeters. Write an equation to express the total number of centimeters \( Z \) in \( y \) meters.

14) Every gallon is 4 quarts. Write an equation to express the total number of quarts \( Z \) in \( y \) gallons.

15) Every dollar is 100 pennies. Write an equation to express the total number of pennies \( Z \) in \( y \) dollars.

<table>
<thead>
<tr>
<th>Number</th>
<th>Equation</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>( y \cdot 8 = Z )</td>
</tr>
<tr>
<td>2</td>
<td>( y \cdot 5 = Z )</td>
</tr>
<tr>
<td>3</td>
<td>( y \cdot 2 = Z )</td>
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<tr>
<td>4</td>
<td>( y \cdot 10 = Z )</td>
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<tr>
<td>5</td>
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<tr>
<td>13</td>
<td>( y \cdot 100 = Z )</td>
</tr>
<tr>
<td>14</td>
<td>( y \cdot 4 = Z )</td>
</tr>
<tr>
<td>15</td>
<td>( y \cdot 100 = Z )</td>
</tr>
</tbody>
</table>
### Solve each problem.

1. Every meter is 100 centimeters. Write an equation to express the total number of centimeters \((Z)\) in \((y)\) meters.

\[ y \times 100 = Z \]

2. Every quarter is 5 nickels. Write an equation to express the total number of nickels \((Z)\) in \((y)\) quarters.

\[ y \times 5 = Z \]

3. Every dollar is 4 quarters. Write an equation to express the total number of quarters \((Z)\) in \((y)\) dollars.

\[ y \times 4 = Z \]

4. For each kilogram there are 1,000 grams. Write an equation to express the total number of grams \((Z)\) in \((y)\) kilograms.

\[ y \times 1,000 = Z \]

5. Every yard is 3 feet. Write an equation to express the total number of feet \((Z)\) in \((y)\) yards.

\[ y \times 3 = Z \]

6. Every quart is 2 pints. Write an equation to express the total number of pints \((Z)\) in \((y)\) quarts.

\[ y \times 2 = Z \]

7. Every centimeter is 10 millimeters. Write an equation to express the total number of millimeters \((Z)\) in \((y)\) centimeters.

\[ y \times 10 = Z \]

8. Every dollar is 100 pennies. Write an equation to express the total number of pennies \((Z)\) in \((y)\) dollars.

\[ y \times 100 = Z \]

9. Every quarter is 25 pennies. Write an equation to express the total number of pennies \((Z)\) in \((y)\) quarters.

\[ y \times 25 = Z \]

10. Every dollar is 10 dimes. Write an equation to express the total number of dimes \((Z)\) in \((y)\) dollars.

\[ y \times 10 = Z \]

11. Every gallon is 4 quarts. Write an equation to express the total number of quarts \((Z)\) in \((y)\) gallons.

\[ y \times 4 = Z \]

12. Every cup is 8 ounces. Write an equation to express the total number of ounces \((Z)\) in \((y)\) cups.

\[ y \times 8 = Z \]

13. For each pound there are 16 ounces. Write an equation to express the total number of ounces \((Z)\) in \((y)\) pounds.

\[ y \times 16 = Z \]

14. Every pint is 2 cups. Write an equation to express the total number of cups \((Z)\) in \((y)\) pints.

\[ y \times 2 = Z \]

15. Every kilometer is 1,000 meters. Write an equation to express the total number of meters \((Z)\) in \((y)\) kilometers.

\[ y \times 1,000 = Z \]
Solve each problem.

1) Every meter is 100 centimeters. Write an equation to express the total number of centimeters \(Z\) in \(y\) meters.

2) Every quarter is 5 nickels. Write an equation to express the total number of nickels \(Z\) in \(y\) quarters.

3) Every dollar is 4 quarters. Write an equation to express the total number of quarters \(Z\) in \(y\) dollars.

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14) Every pint is 2 cups. Write an equation to express the total number of cups \(Z\) in \(y\) pints.

15) Every kilometer is 1,000 meters. Write an equation to express the total number of meters \(Z\) in \(y\) kilometers.

Answers

1. \(y \cdot 100 = Z\)
2. \(y \cdot 5 = Z\)
3. \(y \cdot 4 = Z\)
4. \(y \cdot 1,000 = Z\)
5. \(y \cdot 3 = Z\)
6. \(y \cdot 2 = Z\)
7. \(y \cdot 10 = Z\)
8. \(y \cdot 100 = Z\)
9. \(y \cdot 25 = Z\)
10. \(y \cdot 10 = Z\)
11. \(y \cdot 4 = Z\)
12. \(y \cdot 8 = Z\)
13. \(y \cdot 16 = Z\)
14. \(y \cdot 2 = Z\)
15. \(y \cdot 1,000 = Z\)
Solve each problem.

1) For each pound there are 16 ounces. Write an equation to express the total number of ounces \( Z \) in \( y \) pounds.

   \[ Z = y \times 16 \]

2) Every meter is 100 centimeters. Write an equation to express the total number of centimeters \( Z \) in \( y \) meters.

   \[ Z = y \times 100 \]

3) Every cup is 8 ounces. Write an equation to express the total number of ounces \( Z \) in \( y \) cups.

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