

- List all factors of 24.
- Consider a rectangle with sides 15 ft and 5 ft long.
 - Compute the perimeter of the rectangle. Include units in your computation and answer.
 - Compute the area of the rectangle. Include units in your computation and answer.
- Perform the divisions with remainder. Show both the quotient and the remainder. For example, $19 \div 7 = 2 \text{ R } 5$.
 - $99 \div 4$
 - $52 \div 7$
- Perform the indicated operations. Show all steps.
 - $8 - 2(10 - 3^2 + 1) + 5$
 - $\left((4^2 - 13)^2 - 7\right)^2 - 1^3$
 - $\frac{20 - 4^2}{2}$
 - $20 - \frac{4^2}{2}$
 - $17 - 4(20 - 2 \cdot 3^2)$
 - $\frac{60 \div 3 \cdot 2}{12 - 3 + 1}$
 - $\sqrt{40 - \sqrt{16}}$
 - $\frac{3^2 - 2^3 + 5}{20 - 2 \cdot 3^2 - 2}$
 - $(30 - 2(3 + 2(7 \cdot 4 - 5^2)))$
- Evaluate each of the following expressions if $x = 3$ and $y = 7$.
 - $2x + 4y$
 - $2xy$
 - $y^2 - x^2$
 - $(y - x)^2$
 - $2(x + y)$
 - $2x + y$
 - $(y - 1)^{x-1}$
 - $\frac{y - 1}{x}$
 - $\frac{3y - 1}{2x - 1}$
 - $(2x - 1)(y + 1)$
 - $2xy + 2x - y - 1$
 - $\frac{8 - x + 1}{y - 5 - 2}$
- Label each of the following statements as true or false.
 - Every natural number is an integer.
 - Every integer is a natural number.
 - $2 \leq 12$
 - $2 < 12$
- Consider the equation $x^3 - x + 5 = 2x^2 + 4x - 1$
 - Is $x = 1$ a solution of the equation?
 - Is $x = 2$ a solution of the equation?
 - Is $x = 3$ a solution of the equation?
 - Is $x = -1$ a solution of the equation?
 - Is $x = -2$ a solution of the equation?

Answers

1. 1, 2, 3, 4, 6, 8, 12, 24
2. a) $P = 40$ ft b) $A = 75$ ft²
3. a) 24 R 3 b) 7 R 3
4. a) 9 b) 3 c) 2 d) 12 e) 9 f) 4 g) 6 h) undefined i) 12
5. a) 34 b) 42 c) 40 d) 16 e) 20 f) 13 g) 36 h) 2
i) 4 j) 40 k) 40 l) undefined
6. a) true b) false c) true d) true
7. a) yes, LHS=RHS= 5
b) no, LHS= 11, RHS= 15
c) yes, LHS=RHS= 29
d) no, LHS= 5, RHS= -3
e) yes, LHS=RHS= -1