

Solving Numerical and Algebraic Expressions

1. Evaluate the following expressions.

- a. $548 + (347 - 132)$
- b. $4n + 8 + 3m + 7$ if $n = 3$; $m = 4$
- c. $3s + 2t + 5$ if $s = 2$; $t = 5$
- d. $(2a - 3) + (b + 5)$ if $a = 3$; $b = 7$
- e. $(3y - 7) + (8 - 2)$ if $y = 10$
- f. $a + (3 + b) - 5$ if $a = 11$; $b = 15$

Solution:

- a.
- b.
- c.
- d.
- e.
- f.

2. Write an expression for each statement below.

- a. How much longer the walnut tree is than a pear tree?
- b. What is the result if you add the height of the pin oak tree and the height of redwood tree?
- c. How much longer is the tallest tree than the smallest tree?

Height of Plants	
Name	Height (ft)
Plums	20
Redwood	200
Walnut	100
Pear	40
Pin Oak	70

Solution:

- a.
- b.
- c.

3. Write an expression using variable m . What does the variable represent? Evaluate the expression if $m = 18$

- a. There are m applicants for the teaching position. Only 5 applicants were accepted.
- b. Rose needs m eggs to make pancakes. She only had 10 eggs.
- c. Sam need to run m meters. He finished running 7 meters.
- d. Ron earned 20 point during the first round and another m points on the second round.

Solution:

- a.
- b.
- c.
- d.

4. Amber bought a dress for \$65. The cashier gave her p dollars change. What does the expression $65 + p$ represents?

Solution:

5. Evaluate the expression $(a + b) - 8 + 2b = 6$ if $b = 3$.

- a. 3
- b. 5
- c. 6
- d. 0

Solution:

6. Mark received \$77 from his grandpa. He spent \$45 to buy a pair of shoes. His mother gave him \$10 the next day. Which expression represents the total amount of money Mark have now?

- a. $77 - 45 + 10$
- b. $77 - 45 - 10$
- c. $77 + 45 - 10$
- d. $77 + 45 + 10$

Solution:

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Answer Key

1.
 - a. 763
 - b. 39
 - c. 21
 - d. 15
 - e. 29
 - f. 24
2.
 - a. $100 - 40$
 - b. $70 + 200$
 - c. $200 - 20$
3.
 - a. $m - 5$ (m = total number of applicants); Expression value is 13 if $m = 18$
 - b. $m - 10$ (m = number of eggs needed); Expression value is 8 if $m = 18$
 - c. $m - 7$ (m = total meters Sam needs to run); Expression value is 11 if $m = 18$
 - d. $20 + m$ (m = points earned by Ron on the second round); Expression value is 38 if $m = 18$
4. $65 - p$ represents the amount of money Amber gave to the cashier.
5. B
6. A