

6.EE.2: Worksheet

Solutions

1. Write an expression for the calculation “The sum of x and 2.”

$$x + 2$$

2. Write an expression for the calculation “The product of 4 and the difference between y and 18.”

$$4(y - 18)$$

3. Write an expression for the calculation “Half of the sum of triple b and 13 minus 9.”

$$\frac{1}{2}(3b + 13) - 9$$

4. Identify all the terms in the expression $2 + 3(4 + 7x)$.

The terms are 2 and $3(4 + 7x)$, with the second term made up of two factors (3 and $4 + 7x$), the second of which is the sum of two separate terms, 4 and $7x$.

5. Identify all the different parts (terms, factors, coefficients, etc.) of the expression $10x + 2$.

Answers may vary. In $10x + 2$, 10 is a constant coefficient, x is a variable, both 10 and x are factors of the term $10x$, 2 is a constant term, and the entire expression $10x + 2$ is a sum.

6. Identify all the different parts (terms, factors, coefficients, etc.) of the expression $7(2a + 1)$.

Answers may vary. We can treat the entire expression as a product and a single term with two factors, 7 and $2a + 1$. We can also see $2a + 1$ as a sum of two terms, $2a$ and 1.

7. What is the value of the expression $3x + 7$ at $x = 8$.

$$31$$

8. What is the value of the expression $3(z^2 - 0.01) - 0.1$ at $z = 0.3$?

$$0.14$$

9. The volume of a cube is given by the expression s^3 and its surface area is given by the expression $6s^2$, where s is the length of the cube's side. What are the volume and surface area of a cube with a side length of 2 inches?

Its volume is 8 inches cubed and its surface area is 24 inches squared.

10. The force of gravity on an object in Newtons depends on the object's mass in kilograms, m , and is given by the expression $9.8m$. If Alice weighs 56.2 kilograms and she falls down the rabbit hole, what is the force of gravity on Alice?

$$550.76 \text{ Newtons}$$