

Evaluate the expression given $x = -2, y = 3, z = 8$

1. $(y + 4) - 3(x + 1)$

2. $(x - 1)^2(y + 4)$

3. $5 + 8x \div 4y - \frac{6z}{y}$

Simplify and create an equivalent expression.

4. $5b + 3(3b + 2) - 4$

5. $4x - 2(-6 - 5x)$

Writing expressions

6. Seven less than a number n

7. The product of 9 and a number n increased by 12

Interpreting terms

8. An electrician charges \$45 per hour and spends \$20 a day on gasoline. The algebraic expression $45x - 20$ represents his earnings for one day.

What does the x represent?

What does $45x$ represent?

What does the -20 represent?

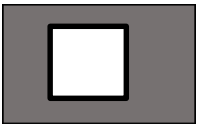
Distributive property

9. $3x(7x^2 + 4x - 7)$

10. $4y^3(5y^3 - 8y - 2)$

Adding / subtracting polynomials

11. The area of the large rectangle is $2x^2 - 8 - 8x$ and the area of the smaller square is $6 + 4x + 7x^2$. What is the area of the shaded region?



12. $(2x^4 + x^3 + 5x) + (6 + x^3 - 4x^4)$

13. $(-7a^2 - 3a^3 + 5a) - (-10a^2 + 5a + 4a^3)$

14. $(2y^2 - 5y + 3) + (y^2 + 9y - 1)$

Multiplying polynomials

15. $(x + 6)(x - 3)$

16. $(x - 7)(x - 9)$

17. $(x + 4)(4x^2 - 5x + 9)$

18. $(x + 2)(x^2 + 8x - 1)$