

Name: _____

Class: _____

Date: _____

1. Simplify the following expressions:

(a) $4 - 3$

1(a) _____

(b) $6(-9)$

1(b) _____

(c) $-9(-6)$

1(c) _____

(d) $-4 + (-3)$

1(d) _____

(e) $-5 - 8$

1(e) _____

(f) $-3 - (-4)$

1(f) _____

(g) $6(4)$

1(g) _____

(h) $-4(6)$

1(h) _____

(i) $\frac{0}{-5}$

1(i) _____

(j) $\frac{-5}{0}$

1(j) _____

(k) $(-1.6)(4.9)$

1(k) _____

(l) $(0.2)(0.5)$

1(l) _____

(m) $4.05 - 0.2$

1(m) _____

(n) $(2.5) \div (-5)$

1(n) _____

(o) $-0.0025 - 0.05$

1(o) _____

2. Simplify the following expressions:

(a) $\frac{-32}{-4}$

2(a) _____

(b) $\frac{-5}{15}$

2(b) _____

(c) $\left(-\frac{3}{4}\right) \times \left(-\frac{8}{15}\right)$

2(c) _____

(d) $\left(\frac{5}{8}\right) - \left(-\frac{3}{4}\right)$

2(d) _____

(e) $\left(\frac{2}{3}\right)^2 + \left(\frac{3}{4}\right)$

2(e) _____

3. Simplify the following expressions:

(a) $3 - 12 \div 2$

3(a) _____

(b) $(-3)^2 - (-2)^3$

3(b) _____

(c) $-3 \cdot 2 + 8 \cdot (-3)$

3(c) _____

(d) $8 \cdot 4 \div 2 - 5$

3(d) _____

(e) $-(1 - 3)^2 + (-2 + 5)^2$

3(e) _____

4. Given $a = -3$, $b = 6$, and $c = -2$. Evaluate the following expressions:

(a) $-2a + 3c^2$

4(a) _____

(b) $b \div a - c \cdot a$

4(b) _____

(c) $\frac{3c}{2a}$

4(c) _____

(d) $c^2 - (-b) + (-a)^2$

4(d) _____

(e) $-a^3 + (-c)^3$

4(e) _____

5. (a) $8x - 5x + 7x$

5(a) _____

(b) $4a + 2b - 3c + 2b - 4a$

5(b) _____

(c) $4xy^2 + 5xy - 3xy^2$

5(c) _____

(d) $3a - 4b - 6a + 2b + 3a$

5(d) _____

(e) $7x^2 + 8 - 5x^2 + 4$

5(e) _____

Simplify the following expressions.

6. (a) $-2(4x + 3)$

6(a) _____

(b) $2(3 - 9x)$

6(b) _____

(c) $4x - 2(2x - 6)$

6(c) _____

(d) $-7x - 2(3x - 3) - (-15)$

6(d) _____

(e) $3a^2 - 4(2a + b) - 4b$

6(e) _____

Solve the following equations for indicated variable.

7. $y + 5 = -25$

7. _____

8. $-3x = 21$

8. _____

9. $-\frac{3}{5}x = -15$

9. _____

10. $8 - 2x = 4$

10. _____

11. $-7a - 4 = -25$

11. _____

12. $-3x - 8 + 5x + 7 = 4x - 2 + 8 - 9x$

12. _____

13. $8x - 5(2x - 3) = 5(x - 4)$

13. _____

14. $2(3x - 5) + 6x = 5 - 3(2x - 3)$

14. _____

Translate the following verbal expressions into mathematical expressions.

15. (a) Subtract 5 from y 15(a) _____

(b) The quotient of x and 3 times y 15(b) _____

(c) 5 more than the product of 4 and x 15(c) _____

(d) 5 less than the quotient of x and y 15(d) _____

(e) 7 times the sum of x and 4 15(e) _____

Translate the following verbal expressions into mathematical expressions. and solve for the variable.

16. The difference of 3 times a number and 4 is 8. Find the number.

16. _____

17. The quotient of twice x and 3 is 24 Find the number.

17. _____

18. 6 less than the product of 2 and x is 4 times that same number. Find the number.

18. _____

19. The difference of a number and 2 is 3 times the sum of the same number and 6.
Find the number.

19. _____