

ALGEBRA 1
CHAPTER 1 REVIEW

Write an algebraic expression for each phrase. Use "x" for the number.

1. 8 less a number.

2. 8 less than a number.

3. Five more than three times a number.

4. Twice the difference of a number and seven.

In 5 – 10, simplify each expression.

5. $-15 \div 5(3) - 1^2$

6. $\frac{-4^2 - 6 + 2}{4 - (-1)}$

7. $-18y^2 - 6y + 7y^2 + 10y$

8. $-\frac{1}{7}(14x - 7)$

9. $-5|-4 - 7|$

10. $\pm\sqrt{\frac{16}{25}}$

In 11 and 12, evaluate each expression if $a = -2$, $b = 3$ and $c = -1$.

11. $5a^2 - bc$

12. $\frac{ac + 6b}{a - b + c}$

In 13 – 14, name the set or sets of numbers to which each number belongs. (N, W, Z, I, Q, R)

13. $-\sqrt{100}$

14. 2π

15. Order $-\frac{13}{4}$, $-\sqrt{16}$, $-3.\bar{6}$ from least to greatest.

In 16 – 19, name the property represented in each algebraic statement.

16. $-8 \cdot 1 = -8$

17. $9 \cdot -1 = -9$

18. $(x + 8) + 3 = x + (8 + 3)$

19. $(x + 8) + 3 = 3 + (x + 8)$

Tell whether each equation is true, false or open.

20. $\frac{5n+3}{2} = -4$

21. $3(12) \div 6^2 = 1$

In 22 and 23, simplify each expression.

22. $-3(5x - 4y + 2)$

23. $\frac{24m-16}{8}$

24. Explain/show how you would solve $3(198)$ mentally.

25. Is the ordered pair $(4, -3)$ a solution to the equation $2x - 5 = -y$?