NAME_____**DATE**_____**PER.**_____

FOUNDATIONS OF ALGEBRA

Simplify each expression.

1. $17x + 4 - 3x =$ _____	2. $2 + a - a - 12 =$ _____
3. $5x^2 + 10x^2 =$ _____	4. $\frac{1}{2}r^2 + 10r - \frac{1}{3}r^2 - 5r =$ _____
5. $-2z + 4x - 3y + 18 =$ _____	6. $-7a - 2b + 7 + 2b + 5a =$ _____
7. $xy + 5x - 3y - 7x + 2xy - 4z =$ _____	8. $6a^2 - b - c - a^2 + 4b + c =$ _____

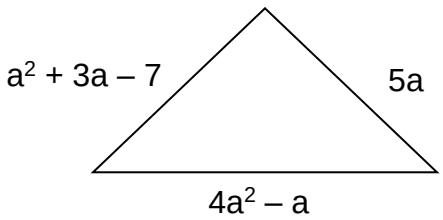
9. Mr. McNiel and Mrs. Rinn's classroom closets both contain notebooks, pencils, and calculators. The value of the items inside each closet can be represented by the expressions below.

Mr. McNiel: $\frac{1}{6}p + 0.5n + 85c + 3$

Mrs. Rinn: $\frac{5}{2}p + \frac{1}{4}n + 85c$

Write an expression that represents the combined value of the items in both closets.

10. What is the perimeter of the given triangle?



Answer:_____

Simplify each expression.

11. $4(f - 2) =$ _____	12. $7 - 2(2c - 1) =$ _____

13. $-3.2(g + 4) - 5g + 1 =$ _____	14. $12 + 2(3v - 4) =$ _____
15. $5h - 3(4h - 3) + 2 =$ _____	16. $3 + \frac{1}{2}(2x - 12) + 4x =$ _____

Solve each of the following equations.

17. $3c + 5 = 20$ $c =$ _____	18. $7 - 3a = -14$ $a =$ _____
19. $\frac{3}{4}x + 14 = 8$ $x =$ _____	20. $-19 = 3m - 1$ $m =$ _____