

Distributive Property

Simplify each expression.

1) $9(-2 + 3x)$

$$-18 + 27x$$

2) $-8(2n + 2)$

$$-16n - 16$$

3) $-7(-3 + 2m)$

$$21 - 14m$$

4) $5p(p + 2)$

$$5p^2 + 10p$$

5) $-3 - 5(1 + 4x)$

$$-3 - 5 - 20x$$

$$-20x - 8$$

6) $-2n^2 - 3n(7n + 1)$

$$-2n^2 - 21n^2 - 3n$$

$$-23n^2 - 3n$$

7) $10(3m + 1) - 4m$

$$30m + 10 - 4m$$

$$26m + 10$$

8) $6r + 2r(4 + 8r)$

$$6r + 8r + 16r^2$$

$$16r^2 + 14r$$

9) $-7(3x - 8) - x$

$$-21x + 56 - x$$

$$-22x + 56$$

10) $10(-5 - n) - 8(n + 6)$

$$-50 - 10n - 8n - 48$$

$$-18n - 98$$

11) $-9(10b - 2) - 8(b + 10)$

$$-90b + 18 - 8b - 80$$

$$-98b - 62$$

12) $-8(-3v - 7) - 3(10 - 8v)$

$$24v + 56 - 30 + 24v$$

$$48v + 26$$

13) $-3(-4 - 5x) + 2(7 - 9x)$

$$12 + 15x + 14 - 18x$$

$$-3x + 26$$

14) $-6(8 - 3x) + 6(3x - 9)$

$$-48 + 18x + 18x - 54$$

$$36x - 102$$

Factoring the Difference of 2 Squares

Factor each completely.

1) $16n^2 - 100$

$$4(4n^2 - 25)$$

$$4(2n+5)(2n-5)$$

3) $v^2 - 1$

$$(v+1)(v-1)$$

5) $a^2 - 25$

$$(a+5)(a-5)$$

7) $2p^2 - 18$

$$2(p^2 - 9)$$

$$2(p+3)(p-3)$$

9) $3n^2 - 75$

$$3(n^2 - 25)$$

$$3(n+5)(n-5)$$

11) $125r^2 - 5$

$$5(25r^2 - 1)$$

$$5(5r+1)(5r-1)$$

13) $16n^2 - 36$

$$4(4n^2 - 9)$$

$$4(2n+3)(2n-3)$$

15) $50n^2 - 18$

$$2(25n^2 - 9)$$

$$2(5n+3)(5n-3)$$

17) $36k^2 - 16$

$$4(9k^2 - 4)$$

$$4(3k+2)(3k-2)$$

2) $27b^2 - 48$

$$3(9b^2 - 16)$$

$$3(3b+4)(3b-4)$$

4) $25x^2 - 1$

$$(5x+1)(5x-1)$$

6) $75k^2 - 27$

$$3(25k^2 - 9)$$

$$3(5k+3)(5k-3)$$

8) $125x^2 - 20$

$$5(25x^2 - 4)$$

$$5(5x+2)(5x-2)$$

10) $2m^2 - 2$

$$2(m^2 - 1)$$

$$2(m+1)(m-1)$$

12) $5x^2 - 20$

$$5(x^2 - 4)$$

$$5(x+2)(x-2)$$

14) $36b^2 - 4$

$$4(9b^2 - 1)$$

$$4(3b+1)(3b-1)$$

16) $32x^2 - 50$

$$2(16x^2 - 25)$$

$$2(4x+5)(4x-5)$$

18) $64a^2 - 4$

$$4(16a^2 - 1)$$

$$4(4a+1)(4a-1)$$