

Name _____ block _____

Quadratic Review 2

Find the product

1) $(3x + 2)(2x - 5)$

2) $(x + 12)(x - 3)$

3) $(4x + 7)(4x - 7)$

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

5) $(2x + 1)^2$

6) $(x - 14)^2$

7) $(3x + 1)(x^2 - 4x + 2)$

8) $(x - 3)(x^3 + 7x^2 - 9)$

Add or subtract

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

10) $(3x^2 - 4) + (7x^2 - 3x - 6)$

11) $(x^3 + 2x^2 - 3x + 9) - (x^2 + 5x - 6)$

12) $(6x^2 + 7x - 3) - (4x^2 - 2x + 7)$

Solve the equation. Find the roots.

13) $x^2 + 5x - 14 = 0$

14) $x^2 - 4x - 5 = 0$

15) $x^2 + 3x = 54$

16) $x^2 + 3x - 31 = -3$

17) $2x^2 - 9x - 35 = 0$

18) $3x^2 + 16x + 5 = 0$

19) $4x^2 + 12x = -9$

20) $2x^2 - 65 = -7$

What should be added to both sides to complete the square?

21) $x^2 - 6x = -10$

22) $x^2 = 10x = 1$

23) $x^2 + 16x = 12$

24) $x^2 - 2x = 7$

25) An object is dropped from a building 128ft. tall. Use $h = -16t^2 + 128$ to determine how many second it takes to hit the ground.

26) A rocket was launched with an initial velocity of 192ft/sec. The height of the rocket is modeled by $h = -16t^2 + 192t$. How long will it take to reach the ground?

27) The diagonal of a rectangle is 13in. The length is 7 inches more then the width.
What is the width?

28) The area of the triangle in 21cm^2 . The height is 2cm more then 3 times the base.
What is the measure of the base?

29) An object is launched downward with an initial velocity of 80ft/sec. from a bridge 224 feet above the water. The height is modeled by $h = -16t^2 - 80t + 224$. How many second will it take the object to hit the water?