Practice 18.3b_c

Name_____

Solve the equation.

    1) $(7x + 4)^2 = 15$

    2) $6x^2 + 3 = 153$

Find the term that should be added to the expression to form a perfect square trinomial. Write the resulting perfect square trinomial in factored form.

    3) $x^2 + 8x$

    4) $x^2 - 14x$

    5) $x^2 - 5x$

Solve the equation by completing the square.

    6) $x^2 - 2x - 15 = 0$

    7) $x^2 + 14x + 35 = 0$

    8) $x^2 + 5x - 5 = 0$

    9) $4x^2 + 6x = -1$

    10) $3x^2 = -10x - 4$

    11) $x^2 = 5 - 6x$

Solve the quadratic equation by any method.

12) $x^2 + 11x = 0$

13) $4x^2 + 8x = -2$

14) $\frac{4}{9}x^2 - \frac{4}{3}x = -1$

15) $3x(x - 1) = 10$

Solve the formula for the specified variable.

16) $A = 3\pi a^2$ for a

17) $Ve = \frac{1}{2}mv^2$ for v

Solve the problem.

18) The position of an object moving in a straight line is given by $s = 2t^2 - 3t$, where s is in meters and t is the time in seconds the object has been in motion. How long will it take the object to move 17 meters?

1) $\dfrac{-4 \pm \sqrt{15}}{7}$

2) ± 5

3) $16; (x + 4)^2$

4) $49; (x - 7)^2$

5) $\dfrac{25}{4}; \left(x - \dfrac{5}{2}\right)^2$

6) $5, -3$

7) $-7 \pm \sqrt{14}$

8) $\dfrac{-5 \pm 3\sqrt{5}}{2}$

9) $\dfrac{-3 \pm \sqrt{5}}{4}$

10) $\dfrac{-5 \pm \sqrt{13}}{3}$

11) $-3 \pm \sqrt{14}$

12) $-11, 0$

13) $\dfrac{-2 \pm \sqrt{2}}{2}$

14) $\dfrac{3}{2}$

15) $\dfrac{3 \pm \sqrt{129}}{6}$

16) $a = \pm\sqrt{\dfrac{A}{3\pi}}$

17) $v = \pm\sqrt{\dfrac{2Ve}{m}}$

18) 3.8 sec