Complete each problem.

1. Which of the following quadratic equations can be solved using the Square Root Property? Select all that apply.

   ☐ $x^2 + 3x = -26$

   ☐ $(x + 5)^2 = 121$

   ☐ $2x^2 = 14$

   ☐ $x^2 + 12x - 13 = 0$

   ☐ $x^2 - 4 = 12$

2. Which of the quadratic equations have no real solution? Select all that apply.

   ☐ $-2x^2 = -26$

   ☐ $(x + 5)^2 = -121$

   ☐ $x^2 + 5 = 1$

   ☐ $(x - 3)^2 - 7 = 0$

   ☐ $x^2 - 4 = 12$

3. Write each solution description below the appropriate equation.

two real rational roots	no real roots	one real rational root	two real irrational roots

$4x^2 = 0$	$x^2 = 37$
$x^2 = 9$	$\frac{x^2}{-2} = 5$

Solve each quadratic equation.

4. $x^2 = 343$

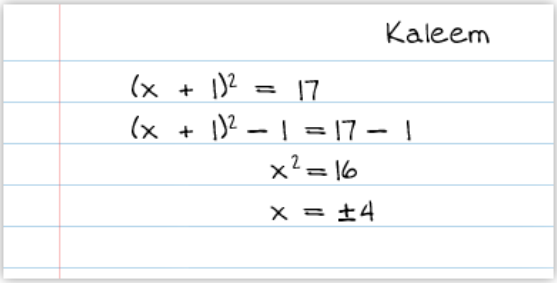
5. $x^2 - 2 = 70$

Solve each quadratic equation.

6. $6x^2 = 96$

7. $25x^2 - 2 = 2$

8. Explain the error in the Kaleem's work below.



Solve each quadratic equation.

9. $(x + 3)^2 = 54$

10. $-2(x - 5)^2 = -200$

11. $3(x - 10)^2 + 7 = 43$

12. $(x + 9)^2 + 8 = -3$

Solve each quadratic equation.

13. $\frac{1}{3}(x-1)^2 = 5$

14. $4\left(x+\frac{1}{2}\right)^2 = 7$

15. Solve for *b.*

    $a = b^2 + 4$

16. The volume *V* of a cylinder can be found using the formula $V = \pi r^2 h$, where *r* is the radius and *h* is the height.

    Solve the formula $V = \pi r^2 h$ for *r.*

    Find the radius of a cylinder with a volume of 10.62 in^3 and a height of 2 inches. Express your answer as a decimal rounded to the nearest tenth.