

Quadratic Equations

UNIT 7A TEST

There are four methods that we have used to solve quadratic equations:

- Isolating the squared term
- Factoring then setting factors equal to zero
- Completing the square
- Using the Quadratic Formula

You may choose to use any one of these four methods to solve the quadratic equations below but **you must use each method at least once**. Choose your methods wisely.

[1] $4x^2 + 17x - 15 = 0$

[2] $x^2 + 6x = 9$

[3] $x^2 = 64 + 12x$

[4] $14 + 3(2x + 5)^2 = 95$

[5] $\frac{2}{5}x^2 - x = \frac{2}{3}$

[6] $(x + 9)(x - 1) = -30$

Although there is more than one way to solve the word problem below, you must write and solve a quadratic equation in order to earn credit for your solution.

- [7] A rectangle has a perimeter of 400 meters and an area of 9,600 meters². Determine the length and width of the rectangle.