

# Math 32 Quick Quiz

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Try to answer these questions as quickly as you can. Do not show work unless you need to.

1. Simplify:

$$\left(\sqrt{a+b} + \sqrt{c+d}\right)^2$$

5. How many solutions are there to the following equation?

$$0 = |x - 1| - 2|x - 3|$$

2. Simplify:

$$\left(\sqrt{a+b}\sqrt{c+d}\right)^2$$

6. What is the  $x$ -coordinate of the vertex of the following parabola?

$$y = 3x^2 - 4x + 17$$

3. Find two numbers adding to 10 so that the sum of their squares is as small as possible.

7. What is the slant asymptote of the graph of the following rational functions?

$$y = \frac{2x^4 + 3x^3 - 4x^2 - 5x + 6}{x^3 - 2x^2 + 3x - 4}$$

4. How many solutions are there to the following equation?

$$0 = |x - 1| + 2|x - 3|$$