

# Algebra 2 Quick Quiz 10182022

Question 1.

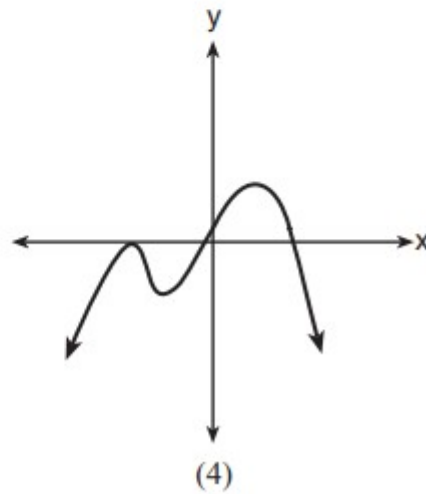
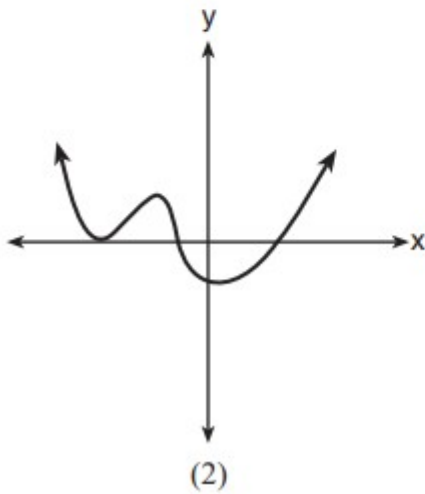
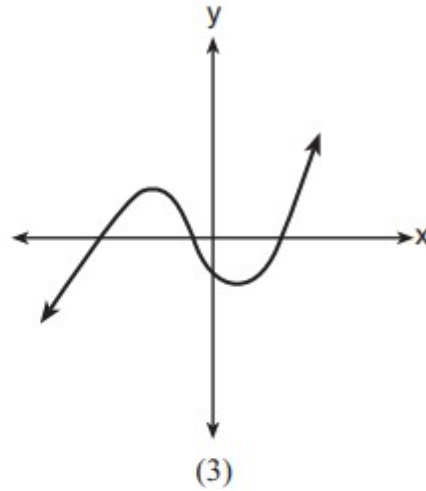
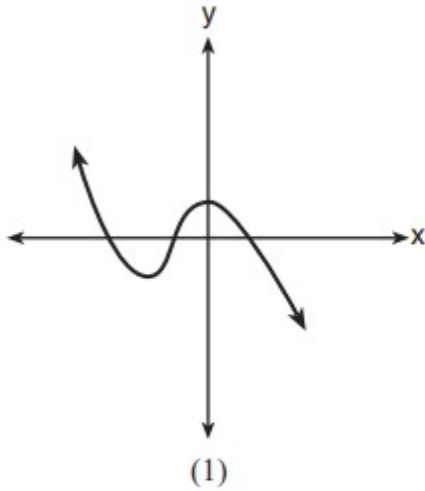
Given  $i$  is the imaginary unit,  $(2 - yi)^2$  in simplest form is

- (1)  $y^2 - 4yi + 4$                       (3)  $-y^2 + 4$   
(2)  $-y^2 - 4yi + 4$                       (4)  $y^2 + 4$

Question 2

Which graph has the following characteristics?

- three real zeros
- as  $x \rightarrow -\infty$ ,  $f(x) \rightarrow -\infty$
- as  $x \rightarrow \infty$ ,  $f(x) \rightarrow \infty$





Question 7.

A solution of the equation  $2x^2 + 3x + 2 = 0$  is

(1)  $-\frac{3}{4} + \frac{1}{4}i\sqrt{7}$                       (3)  $-\frac{3}{4} + \frac{1}{4}\sqrt{7}$

(2)  $-\frac{3}{4} + \frac{7}{4}i$                       (4)  $\frac{1}{2}$

Question 8.

Which equation has non-real solutions?

**A.**  $2x^2 + 4x - 12 = 0$

**B.**  $2x^2 + 3x = 4x + 12$

**C.**  $2x^2 + 4x + 12 = 0$

**D.**  $2x^2 + 4x = 0$

Question 9.

Which function represents exponential decay?

(1)  $y = 2^{0.3t}$                       (3)  $y = \left(\frac{1}{2}\right)^{-t}$

(2)  $y = 1.2^{3t}$                       (4)  $y = 5^{-t}$

Question 10.

The equation  $4x^2 - 24x + 4y^2 + 72y = 76$  is equivalent to

(1)  $4(x - 3)^2 + 4(y + 9)^2 = 76$

(2)  $4(x - 3)^2 + 4(y + 9)^2 = 121$

(3)  $4(x - 3)^2 + 4(y + 9)^2 = 166$

(4)  $4(x - 3)^2 + 4(y + 9)^2 = 436$

Bonus Question

Question 11

Solve for  $x$ :  $\frac{1}{x} - \frac{1}{3} = -\frac{1}{3x}$