

Algebra 2 Quick Quiz 10262022

Question 1.

Which polynomial represents $(3x^2 + x - 4)(2x - 5)$?

- A $6x^3 - 13x^2 - 13x + 20$
- B $6x^3 - 13x^2 - 13x - 20$
- C $6x^3 + 13x^2 + 3x - 20$
- D $6x^3 + 13x^2 + 3x + 20$

Question 2

$$(-2x^2 + 6x + 1) - 2(4x^2 - 3x + 1) =$$

- A $6x^2 - 1$
- B $-10x^2 - 1$
- C $6x^2 + 12x - 1$
- D $-10x^2 + 12x - 1$

Question 3.

Which expression is equivalent to $(6y^2 - 2)(6y + 2)$?

- A $36y^2 - 4$
- B $36y^3 - 4$
- C $36y^2 + 12y^2 + 12y - 4$
- D $36y^3 + 12y^2 - 12y - 4$

Question 4.

$$\square \quad 8a^3 + c^3 =$$

- A $(2a + c)(2a + c)(2a + c)$
- B $(2a - c)(4a^2 + 2ac + c^2)$
- C $(2a - c)(4a^2 + 4ac + c^2)$
- D $(2a + c)(4a^2 - 2ac + c^2)$

Question 5.

The total area of a rectangle is $4x^4 - 9y^2$.
Which factors could represent the length times width?

- A $(2x^2 - 3y)(2x^2 + 3y)$
- B $(2x^2 + 3y)(2x^2 + 3y)$
- C $(2x - 3y)(2x - 3y)$
- D $(2x + 3y)(2x - 3y)$

Question 6.

Which product of factors is equivalent to $(x + 1)^2 - y^2$?

- A $(x + 1 + y)^2$
- B $(x + 1 - y)^2$
- C $(x - 1 + y)(x - 1 - y)$
- D $(x + 1 + y)(x + 1 - y)$

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Question 7.

Which is a simplified form of $\frac{3a^2b^3c^{-2}}{(a^{-1}b^2c)^3}$?

- A $\frac{3a^5}{b^3c^5}$
- B $\frac{3ab}{c^5}$
- C $\frac{3}{b^2c^5}$
- D $\frac{3}{ab^3c^5}$

Question 8.

What is $\frac{20x^{-4}}{27y^2} \div \frac{8x^{-3}}{15y^{-5}}$?

A $\frac{32y^3}{81x^7}$

B $\frac{32}{81xy^7}$

C $\frac{25y^3}{18x^7}$

D $\frac{25}{18xy^7}$

Question 9.

Which product is equivalent to $\frac{4x^2 - 16}{2 - x}$?

A $4(x - 2)$

B $4(x + 2)$

C $-4(x - 2)$

D $-4(x + 2)$

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Question 10.

$$\frac{x^2 + 4x}{x + 3} \cdot \frac{x^2 - 9}{x^2 + x - 12} =$$

A 1

B x

C $x + 4$

D $\frac{x + 3}{x - 3}$

Bonus Question

Question 11

You may use your graphing calculator or an Algebraic method but not Desmos to solve this problem.

$$\begin{cases} y = 1 - x^2 \\ y = 2 - x \end{cases}$$

How many points of intersection does the given system of equations have?

- A.** none
- B.** one
- C.** two
- D.** infinitely many