ALGEBRA II

Get Ready for Algebra II?

Simply open **Photomath** on your phone and scan the problems below to see what you'll be learning this coming semester.

Question 1. What is the slope of the graph of the equation $y = 2x - \frac{3}{2}$?

Question 2. Find algebraically the zero for $p(x) = x^3 + 2x^2 - 4x - 4$?

Question 3. Simplify the expression, i is the imaginary unit:

$xi(i - 7i)^2$

Question 4. Which factorization is incorrect?

A. $4x^2 - 49 = (2x + 7)(2x - 7)$

B. $m^3 - 8y^3 = (m - 2y)(m^2 + 2my + 4y^2)$

C. $a^3 + 3a^2 - 4a + 12 = (a - 2)^2(a + 3)$

D. $k^3 + 5k^2 + 6k + k^2 + 5k + 6 = (k + 1)(k + 2)(k + 3)$

Question 5. What is the solution to $8(2^{x+3} - 48) = 0$ **?**

A. 0 **B.** $\ln 2 - 4$ **C.** $-2 + \log_2 3$ **D.** $2 + \log_2 3$

Question 6. Over the set of integers, factor the expression completely!

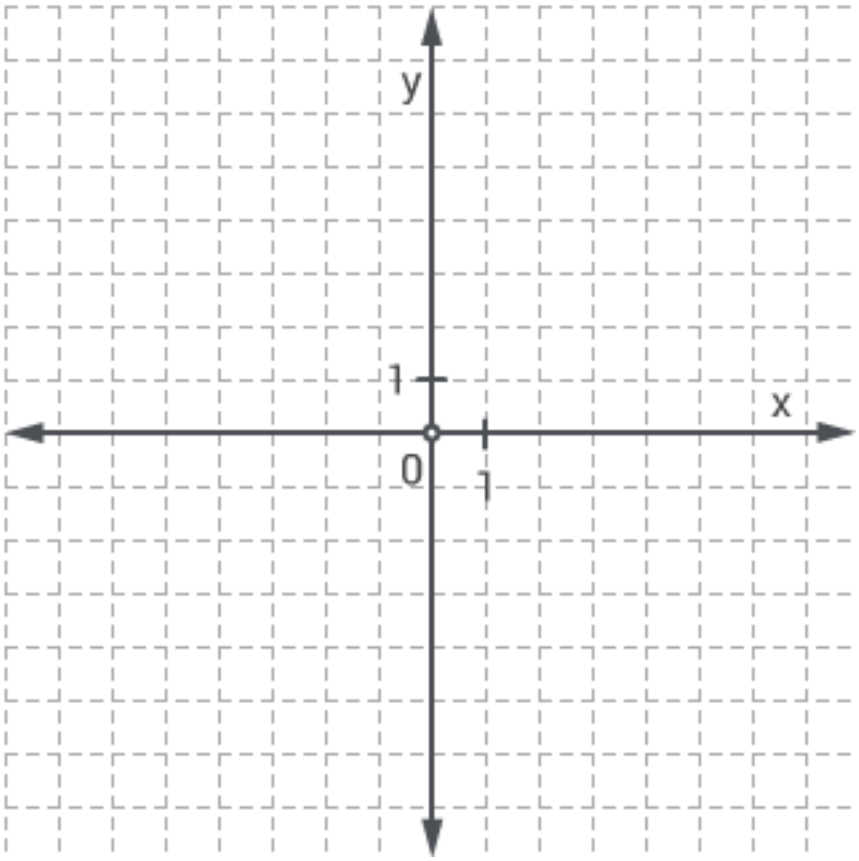
$$4x^2 - x^2 + 16x - 4$$

Question 7. Solve the inequality

$$\sqrt{2} - \sqrt{x - 6} \leq -\sqrt{2}$$

Question 8. On the set of axes below, draw the graph of the equation:

$$y = \log_2 x + 3 - 5$$

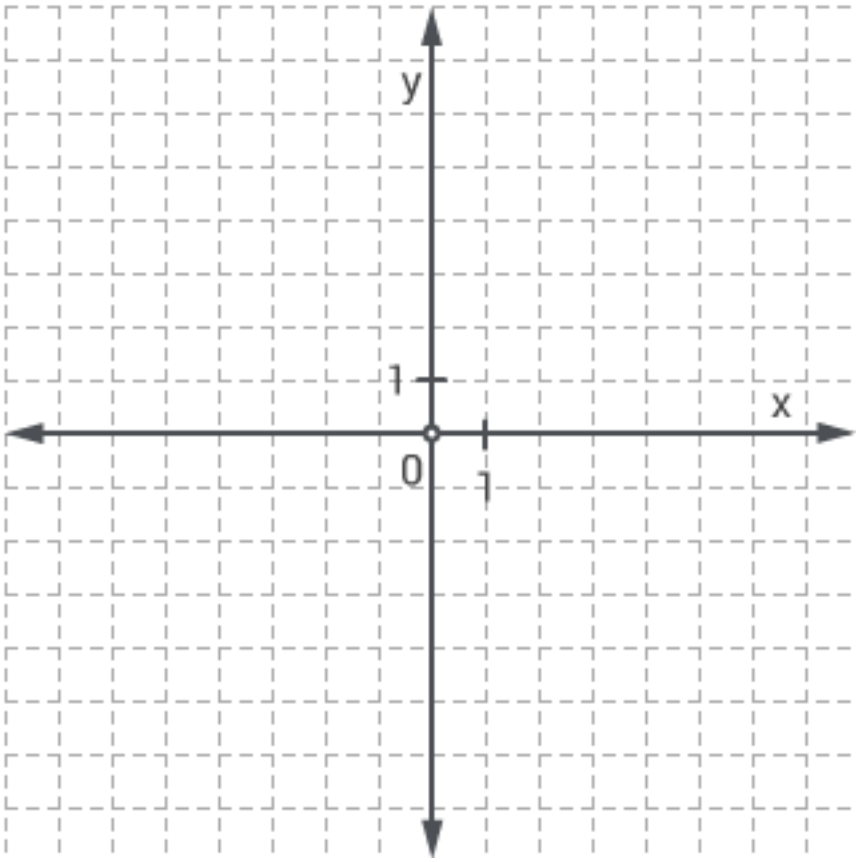


Question 9. Determine the domain of the function:

$$f(x) = \sqrt{\frac{x-2}{x+2}} + \sqrt{\frac{1-x}{1+x}}$$

Question 10. Label the axes and graph the equation:

$$y = \frac{2^x}{2^x - 1}$$



Question 11. The graph of the equation $y = 3x^2$ has its vertex at the coordinate point $(0, 0)$. What coordinate point describes the vertex of the graph of the equation $y = 3x^2 - 3$?

A. $(0, 3)$ **B.** $(-3, 0)$ **C.** $(3, 0)$ **D.** $(0, -3)$