Exercise Set 2 (Calculator)

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If $x > 0$ and $2x^2 - 4x = 30$, what is the value of x?

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If $x^2 + bx + 9 = 0$ has only one solution, and $b > 0$, what is the value of b?

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When $y = 5(x - 3.2)(x - 4.6)$ is graphed in the xy-plane, what is the value of the y-intercept?

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When $y = 5(x - 3.2)(x - 4.6)$ is graphed in the xy-plane, what is the x-coordinate of the vertex?

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If $(2x - 1)(x + 3) + 2x = 2x^2 + kx - 3$ for all values of x, what is the value of k?

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If $b^2 + 20b = 96$ and $b > 0$, what is the value of $b + 10$?

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The graph of $y = f(x)$ in the xy-plane is a parabola with vertex at (3, 7). Which of the following must be equal to $f(-1)$?

A) $f(2)$
B) $f(4)$
C) $f(7)$
D) $f(15)$

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Which of the following functions, when graphed in the xy-plane, has two positive x-intercepts and a negative y-intercept?

A) $y = -2(x - 1)(x + 5)$
B) $y = -2(x + 3)^2$
C) $y = -2(x - 5)^2$
D) $y = -2(x - 1)(x - 5)$

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Which of the following equations has no real solutions?

A) $x^2 - 3x + 2 = 0$
B) $x^2 - 3x - 2 = 0$
C) $x^2 + 2x - 3 = 0$
D) $x^2 + 2x + 3 = 0$

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The graph of the function $y = a(x + 6)(x + 8)$ has an axis of symmetry at $x = k$. What is the value of k?

A) -7
B) -6
C) 7
D) 8

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The graph of the quadratic function $y = f(x)$ in the xy-plane is a parabola with vertex at (6, -1). Which of the following must have the same value as the y-intercept of this graph?

A) $f(-2)$
B) $f(3.5)$
C) $f(12)$
D) $f(13.5)$