For all x, $(4x-4)^2 = ?$

a. $8x-8$
c. $16x^2-16$
b. $16x^2+16$
d. $16x^2-32x+16$

Which of the following expressions represents the area of a rectangle with a length of $7x^2+2$ and a width of $7x+5$?

a. $48x^3+34x^2+14x+10$
c. $49x^3+34x^2+13x+10$
b. $49x^3+35x^2+14x+10$
d. $48x^3+35x^2+13x+10$

Which of the following is an equivalent expression for $\frac{5x+4}{x} - \frac{x+4}{5x}$?

a. $\frac{24x+15}{4x}$
c. $\frac{25x+15}{5x}$
b. $\frac{25x+16}{4x}$
d. $\frac{24x+16}{5x}$

If $4y^2+19y+4=0$, what are the approximate, possible values of y?

a. $y \approx -0.2208$ or $y \approx -4.5292$
c. $y \approx -0.2208$ or $y \approx 2.7792$
b. $y \approx -3.2208$ or $y \approx -4.5292$
d. $y \approx -3.2208$ or $y \approx 2.7792$

What is the x-intercept of the circle $(x-10)^2+(y+4)^2=16$?

a. (-4, 0)
c. (10, 0)
b. (-10, 0)
d. (4, 0)

For all x less than zero, $\frac{x^2-25}{x^3-10x^2+25x}=?$

a. $\frac{x+5}{x-5}$
c. $\frac{x+5}{x^2-5x}$
b. $\frac{-25}{-10x+25}$
d. $\frac{x^2-25}{x^2-10x+25}$

Find all roots of the equation $(x-4)(x^2+5x-50)=0$.

a. $\{-4,5,-10\}$
c. $\{4,5,10\}$
b. $\{4,5,-10\}$
d. $\{4,-5,-10\}$

Which of the following is the least value of z that satisfies the equation $z^2+8z+19=19$?

a. -19
c. -8
b. 0
d. $-\frac{19}{8}$

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What is the line of symmetry of the parabola with the equation $y = -5x^2 + 5x + 8$?

a. $x = (-4 / 5)$
b. $x = (-1 / 2)$
c. $x = (1 / 2)$
d. $x = (1)$

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What are the roots of $24x^2 + 42x + 15 = 0$?

a. $(-5 / 4) and (-2 / 3)$
b. $(-5 / 4) and (-1 / 2)$
c. $(-3 / 2) and (-1 / 2)$
d. $(-3 / 2) and (-2 / 3)$

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Which of the following parabolas has its turning point in the second quadrant of the coordinate plane?

a. $y = -9(x + 5)^2 - 4$
b. $y = -9(x + 5)^2 + 4$
c. $y = -9(x - 5)^2 - 4$
d. $y = -9(x - 5)^2 + 4$

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Which of the following is equavalent to:

$$\frac{x^2 + 8x + 12}{-4x - 24}$$

a. $\frac{x + 6}{-4}$
b. $\frac{x - 2}{-4}$
c. $\frac{x + 2}{-4}$
d. $\frac{x - 6}{-4}$

Which of the following equations has both $x = -2$ and $x = 1$ as its solutions?

a. $(x+1)(x-2) = 0$
b. $(x-1)(x+2) = 0$
c. $(x+1)(x+2) = 0$
d. $(x-1)(x-2) = 0$

For all nonzero values for x and y, $\left(12x^5y^4\right)\left(-12x^4y^5\right) \div \left(4x^3y^3\right) =$

a. $-36x^6y^6$
b. $-36x^6y^7$
c. $-36x^7y^7$
d. $-36x^7y^6$

Which of the values listed below will result in an even integer for any integer x?

a. $7x$
b. $6x^2$
c. $9x^2 - 1$
d. $3x^2 + 1$

Which of the following statements are true regarding the parabola $y = 6x^2 + 2x + 5$. Select all that apply.

a. The parabola opens up.
b. The parabola opens down.
c. (0, 5) is a point on the parabola.
d. (0, –5) is a point on the parabola.
e. The axis of symmetry is $x = (1 / 6)$
f. The axis of symmetry is $x = (-1 / 6)$

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In a standard coordinate plane, which of the following will be coordinates for the x-intercepts of the function below?

$f(x) = (x - 11)(x - 9)(x - 7)$

a. (7, 0)
b. (–11, 0)
c. (0, 7)
d. (11, 0)
e. (–9, 0)
f. (0, 11)
g. (–7, 0)
h. (9, 0)

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If t = –3, then $3t^3 - 4t^2 + 2t - 4 = ?$

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For what value of b in the equation $(2z + b)(z - 9) = 0$ will a solution for z be –8?

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For $4(x - 1)^2 + 3 = 103$, $x = -4$ or $x =$ _____.

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If the expression $g(x) = x^2 + kx - 8$ is equal to zero when $x = -2$, what is the value of k?

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When $x^2 + 40 = 44$, what is the value of x? If the solution could be either positive or negative, answer with the positive.

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If $x = 6$ and $y = 5$, then $x^2y + xy^2 = ?$

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If $(x + b)^2 = x^2 + 4x + b^2$, what is the value of b?

If $x = 6$ is a solution for the equation $-4x^2 + 3x + c = 0$, then c = ?

If $3x = 3y - 12$, then $(y - x)^4$ = ?

For the equation $-5x^2 + 36x + 32 = 0$, $x = (-4/5)$ is one solution. What is the other posible solution for x?

For what value of k does the equation $x^2 + 2kx + 7k = 0$ have exactly one real solution?

If $x = 4$, what is the value of $6x^2 - 2x - 10$?

What value for n will make the equation true?

$(216x^3 + 27) = (6x + 3)(36x^2 - 18x + n)$

What value for n will make the equation true?

$(27x^3 + 343) = (3x + n)(9x^2 - 21x + 49)$

What value for n will make the equation true?

$(27x^3 - 8) = (3x - n)(9x^2 + 6x + 4)$

What value for n will make the equation true?

$(216x^3 - 27) = (6x - 3)(36x^2 + nx + 9)$

What value for n will make the equation true?

$(3x - 4)^2 = 9x^2 + nx + 16$