

If $p = 3x + 4$ and $v = x + 5$, which of the following is equivalent to $pv - 2p + v$?

- A. $3x^2 + 12x + 7$
- B. $3x^2 + 14x + 17$
- C. $3x^2 + 19x + 20$
- D. $3x^2 + 26x + 33$

$$x^2 - x - 1 = 0$$

What values satisfy the equation above?

A. $x = 1$ and $x = 2$

B. $x = -\frac{1}{2}$ and $x = \frac{3}{2}$

C. $x = \frac{1+\sqrt{5}}{2}$ and $x = \frac{1-\sqrt{5}}{2}$

D. $x = \frac{-1+\sqrt{5}}{2}$ and $x = \frac{-1-\sqrt{5}}{2}$

Which expression is equivalent to $\frac{8x(x-7)-3(x-7)}{2x-14}$, where $x > 7$?

- A. $\frac{x-7}{5}$
- B. $\frac{8x-3}{2}$
- C. $\frac{8x^2-3x-14}{2x-14}$
- D. $\frac{8x^2-3x-77}{2x-14}$

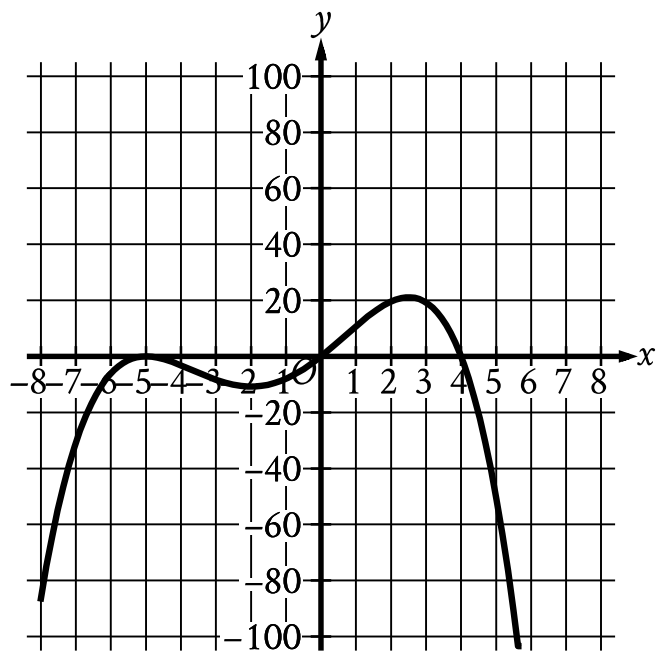
Which of the following is equivalent to the expression $x^4 - x^2 - 6$?

A. $(x^2 + 1)(x^2 - 6)$

B. $(x^2 + 2)(x^2 - 3)$

C. $(x^2 + 3)(x^2 - 2)$

D. $(x^2 + 6)(x^2 - 1)$



Which of the following could be the equation of the graph shown in the xy -plane?

- A. $y = -\frac{1}{10}x(x - 4)(x + 5)$
- B. $y = -\frac{1}{10}x(x - 4)(x + 5)^2$
- C. $y = -\frac{1}{10}x(x - 5)(x + 4)$
- D. $y = -\frac{1}{10}x^{\text{msup}}(x + 4)$

$$(x-4)(x+2)(x-1)=0$$

What is the product of the solutions to the given equation?

- A. 8
- B. 3
- C. -3
- D. -8

$$\frac{2(x+1)}{x+5} = 1 - \frac{1}{x+5}$$

What is the solution to the equation above?

- A. 0
- B. 2
- C. 3
- D. 5

A rectangle has a length of x units and a width of $(x - 15)$ units. If the rectangle has an area of **76** square units, what is the value of x ?

- A. **4**
- B. **19**
- C. **23**
- D. **76**

$$y = x^2 - 4x + 4$$

$$y = 4 - x$$

If the ordered pair (x, y) satisfies the system of equations above, what is one possible value of x ?

If $x \neq 0$, which of the following expressions is

equivalent to $\frac{\sqrt{16x^4y^8}}{x^3}$?

- A. $8x^2y^4$
- B. $4xy^4$
- C. $4x^{-2}y^2$
- D. $4x^{-1}y^4$

$$g(x) = x^2 + 55$$

What is the minimum value of the given function?

- A. 0
- B. 55
- C. 110
- D. 3,025

$$-4x^2 - 7x = -36$$

What is the positive solution to the given equation?

- A. $\frac{7}{4}$
- B. $\frac{9}{4}$
- C. 4
- D. 7