

Answer on Question #54403-Math-Algebra

The following equation has a positive and a negative solution.

$$(\nu \text{ minus } 3 \text{ over } \nu \text{ minus } 1) = (2 \text{ over } \nu + 2)$$

Solve the equation and enter the positive solution in the box below (as an integer or rounded to one decimal place as appropriate).

Solution

$$\frac{\nu - 3}{\nu - 1} = \frac{2}{\nu + 2}$$

$$\nu^2 - \nu - 6 = 2\nu - 2$$

$$\nu^2 - 3\nu - 4 = 0$$

$$D = (-3)^2 - 4 \cdot (-4) = 25$$

$$\nu_1 = \frac{3 + 5}{2} = 4; \nu_2 = \frac{3 - 5}{2} = -1.$$

Answer: 4.