

1. How many ways can the letters in the word FOREVER be arranged?
2. How many ways can 6 students be arranged in a circle?
3. A license plate consists of 2 letters followed by 3 digits. Find the number of license plates that contain the initials of your first and last name in their proper order.
4. A three digit password is created from the digits 0 to 9. Find the ***probability*** that the first number selected is 5 or 7, the second number is 2, and the third number is 3 or 9.

**5. Solve**

$$\frac{4x^2 - 8x - 6}{x^2 - 4x - 5} - \frac{x - 3}{x - 5} = \frac{x}{x + 1}$$

**6. Simplify. State domain restrictions.**

$$\frac{x^3 - x^2}{2x^2 - 13x - 7} \cdot \frac{49 - x^2}{4x^2 + 28x}$$
$$\frac{\quad}{6x^2 + 3x}$$

**7. Solve**

$$x + 2\log 14 = \log 701$$

**8. Solve**

$$14^{x+2} = 701$$