

$$2x^2 - x - 21$$

$$ax^2 + bx + c$$

$$2(-21) = -42$$

$$\frac{-7}{-7} + \frac{6}{6} = -1 \quad (\text{add to } b)$$

$$\frac{-7}{-7} \times \frac{6}{6} = -42 \quad (\text{multiply to } a \cdot c)$$

$$2x^2 - x - 21$$

$$2x^2 - 7x + 6x - 21$$

$$x(2x - 7) + 3(2x - 7)$$

$$(2x - 7)(x + 3)$$

$$y^3 - 6y^2 + 8y$$

$$y^3 - 6y^2 + 8y$$

$$y(y^2 - 6y + 8)$$

$$\frac{-4}{-4} + \frac{-2}{-2} = -6$$

$$\frac{-4}{-4} \times \frac{-2}{-2} = 8$$

$$y(y^2 - 4y - 2y + 8)$$

$$y(y(y - 4) - 2(y - 4))$$

$$y((y - 4)(y - 2))$$

$$y(y - 4)(y - 2)$$