

## ECUACIONES DE PRIMER GRADO

Problema 18:

Resolver:

$$\frac{\frac{x}{2} - 5}{\frac{x+8}{2} - 8} + \frac{x-8}{2} + x = \frac{3x}{2} + \frac{49}{16}$$

Solución Problema 18:

$$\frac{\frac{x}{2} - 5}{\frac{x+8}{2} - 8} + \frac{x-8}{2} + x = \frac{3x}{2} + \frac{49}{16}$$

$$\frac{\frac{x-10}{2}}{\frac{x+8-16}{2}} + \frac{x-8}{2} + x = \frac{3x}{2} + \frac{49}{16}$$

$$\frac{x-10}{x-8} + \frac{x-8}{2} + x = \frac{3x}{2} + \frac{49}{16}$$

$$16(x-10) + 8(x-8)(x-8) + 16(x-8)x = 24x(x-8) + 49(x-8)$$

$$16x - 160 + 8(x^2 + 64 - 16x) + 16x^2 - 128x = 24x^2 - 192x + 49x - 392$$

$$16x - 160 + 8x^2 + 512 - 128x + 16x^2 - 128x - 24x^2 + 192x - 49x + 392 = 0$$

$$-97x = -744$$

$$x = \frac{744}{97}$$