Warm Up Questions

-15

$15 + x = -31$　-15　　$2x - 18 = 22$　$+18$　　$\dfrac{x}{5} - 2 = 10$　$\times 5$

$x = -46$

$\dfrac{2x}{2} = \dfrac{40}{2}$

$x = 20$

$x - 10 = 50$　$+10$

$x = 60$

1. $8x - 4 = + 12 \; + 4$

$$\frac{8x}{8} = \frac{16}{8}$$

$$x = 2$$

2. $\dfrac{m}{3} \times 3 = 12 \times 3$

$$m = 36$$

3. $15 = 5x - 10$

$$5x \boxed{-10} = 15 + 10 \quad {}^{+10}$$

$$\frac{5x}{5} = \frac{25}{5}$$

$$X = 5$$

4. $7 + \dfrac{7r}{3} = 21 \quad {}^{\times 3}$

$$\boxed{21} + 7r = 63 \quad {}^{-21}$$

$$\frac{7r}{7} = \frac{42}{7}$$

$$r = 6$$

5. $6x - 4x = 24$

$$\frac{2x}{2} = \frac{24}{2}$$

$$x = 12$$

6. $5x - 13 = 3x - 1 + 13$

$$5x = 3x - 1 + 13 \quad -3x$$

$$5x = 3x + 12$$

$$5x - 3x = 12$$

$$\frac{2x}{2} = \frac{12}{2}$$

$$x = 6$$

7. $-5m + 10 = 10m - 20$ 8. $3x^2 - \dfrac{x}{3} = 10$

-10 $-10m$

$-5m - 10m = -20 - 10$

$6x - 1x = 20$

$\dfrac{-15m}{-15} = \dfrac{-30}{-15}$

$\dfrac{5x}{5} = \dfrac{20}{5}$

$m = +2$

$x = 4$

9. $(4n) - 6 + (2n) + 2 = 2n - 8$

$$6n - 4 = 2n - 8$$

$$6n - 2n = -8 + 4$$

$$\frac{4n}{4} = \frac{-4}{4}$$

$$n = -1$$

10. $10^{\times 3} = \dfrac{b}{3}^{\times 3} - 8^{\times 3}$

$$30 = b - 24$$

$$b \boxed{-24} = 30 + 24$$

$$b = 54$$

The Ultimate Question

$$\frac{2x}{6} + 2^{\times 6} = \frac{4x}{3} + 4^{\times 6}$$

$$2x + 12 = \frac{24x}{3} + 24$$

$$2x + 12 = 8x + 24$$

$$2x - 8x = 24 - 12$$

$$\frac{-6x}{-6} = \frac{12}{-6}$$

$$x = -2$$