

Nom : \_\_\_\_\_

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## Equations

**1- Calcul littéral**

1.  $x \cdot x \cdot x \cdot 2 \cdot 8 = 16 x^3$

2.  $7 \cdot x \cdot 5 = 35 x$

3.  $x \cdot 7 \cdot 6 = 42 x$

4.  $5 \cdot x \cdot x \cdot 10 = 50 x^2$

5.  $6 \cdot 5 \cdot 4 \cdot x = 120 x$

**Résous les équations selon le modèle.****2- Une étape**

$$\begin{array}{l} \text{a) } 3x = 42 \\ x = 14 \end{array} \quad \left| \begin{array}{l} \\ \\ \end{array} \right. \begin{array}{l} : 3 \\ \\ \end{array}$$

**S = {14}**

$$\begin{array}{l} \text{b) } x + 12 = 56 \\ x = 44 \end{array} \quad \left| \begin{array}{l} \\ \\ \end{array} \right. \begin{array}{l} -12 \\ \\ \end{array}$$

**S = {44}**

$$\begin{array}{l} \text{c) } \frac{x}{3} = 21 \\ x = 63 \end{array} \quad \left| \begin{array}{l} \\ \\ \end{array} \right. \begin{array}{l} \cdot 3 \\ \\ \end{array}$$

**S = {63}**

$$\begin{array}{l} \text{d) } \frac{9}{5}x = 18 \\ 9x = 90 \\ x = 10 \end{array} \quad \left| \begin{array}{l} \\ \\ \\ \end{array} \right. \begin{array}{l} \cdot 5 \\ : 10 \\ \\ \end{array}$$

**S = {10}**

$$\begin{array}{l} \text{e) } -45 + x = 3 \\ x = 48 \end{array} \quad \left| \begin{array}{l} \\ \\ \end{array} \right. \begin{array}{l} + 45 \\ \\ \end{array}$$

**S = {48}**

$$\begin{array}{l} \text{f) } x - 4,7 = -4,4 \\ x = 0,3 \end{array} \quad \left| \begin{array}{l} \\ \\ \end{array} \right. \begin{array}{l} + 4,7 \\ \\ \end{array}$$

**S = {0,3}**

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### 3- Deux étapes

$$\begin{array}{l|l} \text{a) } 5x + 80 = 100 & - 80 \\ 5x = 20 & : 5 \\ x = 4 & \end{array}$$

**S = {4}**

$$\begin{array}{l|l} \text{b) } 8 - 4x = 60 & - 8 \\ - 4x = 52 & : (-4) \\ x = (-13) & \end{array}$$

**S = {-13}**

$$\begin{array}{l|l} \text{c) } 6 - 10x = 82 & - 6 \\ - 10x = 76 & : (-10) \\ x = -7,6 & \end{array}$$

**S = {-7,6}**

$$\begin{array}{l|l} \text{d) } 3x + 6 = 14 & -6 \\ 3x = 8 & :3 \\ x = \frac{8}{3} & \end{array}$$

**S = {  $\frac{8}{3}$  }**

### 4- Deux ou trois étapes

$$\begin{array}{l|l} \text{a) } 2x + 2 = 4x - 8 & + 8 \\ 2x + 10 = 4x & - 2x \\ 10 = 2x & : 2 \\ 5 = x & \end{array}$$

**S = {5}**

$$\begin{array}{l|l} \text{b) } x + 10 = -2x + 13 & + 2x \\ 3x + 10 = 13 & - 10 \\ 3x = 3 & : 3 \\ x = 1 & \end{array}$$

**S = {1}**

$$\begin{array}{l|l} \text{c) } -5x + 1 = 4x + 55 - 3x & \text{On réduit} \\ -5x + 1 = x + 55 & - 1 \\ -5x = x + 54 & - x \\ -6x = 54 & : 6 \\ x = (-9) & \end{array}$$

**S = {-9}**

$$\begin{array}{l|l} \text{d) } 6x - 3x + 24 = 3 + x + 21 & \text{On réduit} \\ 3x + 24 = x + 24 & - 24 \\ 3x = x & - x \\ 2x = 0 & : 2 \\ x = 0 & \end{array}$$

**S = {0}**