

ÉQUATIONS DU PREMIER DEGRÉ

SÉRIES 1 ET 1 BIS

Calcul mental et automatismes – IREM de Clermont-Ferrand

Résoudre les équations
suivantes :

Nº1

$$-x + 8 = -3$$

$$9x = \frac{2}{5}$$

Nº2

$$-7x = 63$$

$$x - 12 = -3$$

Nº3

$$x - \frac{3}{2} = 0$$

$$-5x = 45$$

Nº4

$$x - 9 = -5$$

$$-x + 7 = -5$$

Nº5

$$7x = \frac{2}{3}$$

$$x - \frac{1}{3} = 0$$

Nº6

$$9x = 0$$

$$7 - x = 4$$

Nº7

$$9 - x = 7$$

$$8x = 64$$

Nº8

$$x + 5 = 11$$

$$\frac{7}{5}x = \frac{2}{3}$$

Nº9

$$\frac{5}{2}x = \frac{7}{3}$$

$$7x = 0$$

Nº10

$$6x = 48$$

$$x + 7 = 20$$

CORRECTION

Nº1

$$-x + 8 = -3$$

$$\begin{array}{ccc} \downarrow -8 & & \downarrow -8 \\ -x + 8 & = & -3 \\ -x & = & -11 \end{array}$$

$$\begin{array}{ccc} \downarrow \times(-1) & & \downarrow \times(-1) \\ -x & = & -11 \\ x & = & 11 \end{array}$$

$$x = 11$$

$$9x = \frac{2}{5}$$

$$\begin{array}{ccc} \downarrow \div 9 & & \downarrow \div 9 \\ 9x & = & \frac{2}{5} \\ x & = & \frac{2}{45} \end{array}$$

$$x = \frac{2}{45}$$

$$x = \frac{2}{5} \div 9 = \frac{2}{5} \times \frac{1}{9} = \frac{2}{45}$$

Nº2

$$-7x = 63$$

$$\begin{array}{c} \div(-7) \downarrow \qquad \downarrow \div(-7) \\ \boxed{x = -9} \end{array}$$

$$x - 12 = -3$$

$$\begin{array}{c} +12 \downarrow \qquad \downarrow +12 \\ \boxed{x = 9} \end{array}$$

Nº3

$$x - \frac{3}{2} = 0$$

$\downarrow +\frac{3}{2}$

$$x = \frac{3}{2}$$

$\downarrow +\frac{3}{2}$

$$-5x = 45$$

$\downarrow \div(-5)$

$$x = -9$$

$\downarrow \div(-5)$

Nº4

$$x - 9 = -5$$

$$\begin{array}{ccc} \downarrow & & \downarrow \\ +9 & & +9 \end{array}$$

$$x = 4$$

$$-x + 7 = -5$$

$$\begin{array}{ccc} \downarrow & & \downarrow \\ -7 & & -7 \end{array}$$

$$-x = -12$$

$$\begin{array}{ccc} \downarrow & & \downarrow \\ \div(-1) & & \div(-1) \end{array}$$

$$x = 12$$

Nº5

$$7x = \frac{2}{3}$$

$\div 7$ \downarrow $\div 7$

$$x = \frac{2}{21}$$

$$x = \frac{2}{3} \div 7 = \frac{2}{3} \times \frac{1}{7} = \frac{2}{21}$$

$$x - \frac{1}{3} = 0$$

$\downarrow + \frac{1}{3}$ $\downarrow + \frac{1}{3}$

$$x = \frac{1}{3}$$

Nº6

$$9x = 0$$

$$\begin{array}{ccc} \div 9 & \downarrow & \div 9 \\ & & \end{array}$$

$$x = \frac{0}{9} = 0$$

$$7 - x = 4$$

$$\begin{array}{ccc} -7 & \downarrow & -7 \\ & & \end{array}$$

$$-x = -3$$

$$\begin{array}{ccc} \div(-1) & \downarrow & \div(-1) \\ & & \end{array}$$

$$x = 3$$

Nº7

$$9 - x = 7$$

$$\begin{array}{ccc} -9 & \downarrow & -9 \\ -x & = & -2 \end{array}$$

$$\begin{array}{ccc} \div(-1) & \downarrow & \div(-1) \\ x & = & 2 \end{array}$$

$$x = 2$$

$$8x = 64$$

$$\begin{array}{ccc} \div 8 & \downarrow & \div 8 \\ x & = & 8 \end{array}$$

$$x = 8$$

Nº8

$$x + 5 = 11$$

$$\begin{array}{ccc} & \downarrow & \downarrow \\ -5 & & -5 \end{array}$$

$$x = 6$$

$$\frac{7}{5}x = \frac{2}{3}$$

$$\begin{array}{ccc} \div \frac{7}{5} & & \div \frac{7}{5} \\ \downarrow & & \downarrow \end{array}$$

$$x = \frac{10}{21}$$

$$x = \frac{2}{3} \div \frac{7}{5} = \frac{2}{3} \times \frac{5}{7} = \frac{10}{21}$$

Nº9

$$\frac{5}{2}x = \frac{7}{3}$$

$\div \frac{5}{2}$
↓

$$x = \frac{14}{15}$$

↓ $\div \frac{5}{2}$

$$x = \frac{7}{3} \div \frac{5}{2} = \frac{7}{3} \times \frac{2}{5} = \frac{14}{15}$$

$$7x = 0$$

$\div 7$
↓

↓ $\div 7$

$$x = \frac{0}{7} = 0$$

Nº10

$$6x = 48$$

$$\begin{array}{cc} \div 6 & \div 6 \\ \downarrow & \downarrow \end{array}$$

$$x = 8$$

$$x + 7 = 20$$

$$\begin{array}{cc} -7 & -7 \\ \downarrow & \downarrow \end{array}$$

$$x = 13$$

FIN