### 4.2.1 - Linear Equations

4.2 - Algebra - Solving Equations

Leaving Certificate Mathematics

Ordinary Level & Higher Level





#### **Q.** Solve for *x*: 4x - 1 = 2x + 7.

#### **Q.** Solve for *x*: 4x - 1 = 2x + 7.

**Q.** Solve for *x*: 
$$4x - 1 = 2x + 7$$
.

Answer:

4x - 1 = 2x + 7

**Q.** Solve for *x*: 
$$4x - 1 = 2x + 7$$
.

$$4x - 1 = 2x + 7$$
  
$$4x - 1 + 1 = 2x + 7 + 1$$

**Q.** Solve for *x*: 
$$4x - 1 = 2x + 7$$
.

$$4x - 1 = 2x + 7$$
  

$$4x - 1 + 1 = 2x + 7 + 1$$
  

$$4x = 2x + 8$$

**Q.** Solve for *x*: 
$$4x - 1 = 2x + 7$$
.

$$4x - 1 = 2x + 7$$
  

$$4x - 1 + 1 = 2x + 7 + 1$$
  

$$4x = 2x + 8$$
  

$$4x - 2x = 2x + 8 - 2x$$

**Q.** Solve for *x*: 
$$4x - 1 = 2x + 7$$
.

$$4x - 1 = 2x + 7$$
  

$$4x - 1 + 1 = 2x + 7 + 1$$
  

$$4x = 2x + 8$$
  

$$4x - 2x = 2x + 8 - 2x$$
  

$$2x = 8$$

**Q.** Solve for *x*: 
$$4x - 1 = 2x + 7$$
.

$$4x - 1 = 2x + 7$$
  

$$4x - 1 + 1 = 2x + 7 + 1$$
  

$$4x = 2x + 8$$
  

$$4x - 2x = 2x + 8 - 2x$$
  

$$2x = 8$$
  

$$\frac{2x}{2} = \frac{8}{2}$$

**Q.** Solve for *x*: 
$$4x - 1 = 2x + 7$$
.

#### Answer:

$$4x - 1 = 2x + 7$$

$$4x - 1 + 1 = 2x + 7 + 1$$

$$4x = 2x + 8$$

$$4x - 2x = 2x + 8 - 2x$$

$$2x = 8$$

$$\frac{2x}{2} = \frac{8}{2}$$

$$x = 4$$

4.2 - Algebra - Solving Equations