

Year 7 Knowledge Organiser **SOLVING EQUATIONS**



Key Concept

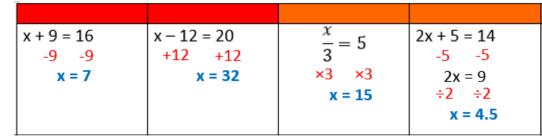
Inverse Operations

Operation	Inverse
+	
	+
×	•
•	×
x ²	\sqrt{x}

Key Words

Unknown: A letter which represents a number we do not know the value of. **Terms:** The numbers and letters in the expression or equation. **Inverse:** The operation which will do the opposite.

Examples



$$\frac{x}{4} - 2 = 4$$
+2 +2
$$\frac{x}{4} = 6$$

$$x4 \times 4$$

$$x = 24$$

$$2(3x + 5) = -14$$
expand
$$6x + 10 = -14$$

$$-10 \quad -10$$

$$6x = -24$$

$$\div 6 \quad \div 6$$

$$x = -4$$

$$2x + 7 = 5x + 1$$

 $-2x$
(smallest x term)
 $+7 = 3x + 1$
 -1 -1
 $6 = 3x$
 $\div 3$ $\div 3$
 $2 = x$

A hegartymaths **Clip Numbers** 177 – 184

Tip

Answers can be:

- Integers
- **Decimals**
- Fractions
- negatives

Questions

2)
$$y - 25 = 15$$

3)
$$2y = 82$$

4)
$$\frac{t}{4} = 7$$

5)
$$\frac{p}{2} - 6 = 2$$

6)
$$3(2x-3) = 15$$

5)
$$\frac{p}{3} - 6 = 2$$
 6) $3(2x - 3) = 15$ 7) $4x - 8 = 2x + 1$