

Equations - Diagnostic Test

Name: _____

Level 1: Core

File RA2-32

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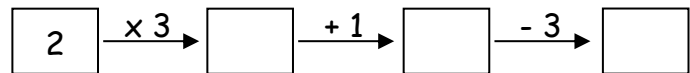
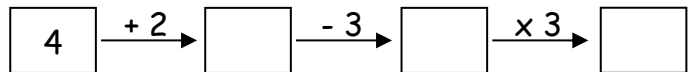
1. Evaluate:

$$4 + 2 \times 5 =$$

$$(4 + 2) \times 5 =$$

$$\frac{6+9}{3} =$$

2. Complete these flow diagrams:



3. Backtrack to find the original number:



4. Build these expressions:



5. Solve these equations using the **flowchart method**:

$$y + 4 = 10$$

$$3h = 21$$

6. Solve these equations using the **balance method**:

$$y + 6 = 15$$

$$6m = 12$$

Level 3 - Extension

1. Solve this equation using the **flowchart method**: $\frac{3y + 2}{4} = 5$

2. Solve this equation using the **balance method**: $2(y + 3) - 1 = 21$

3. Write an **expression** and not an answer.

How many legs do 3 spiders have? _____

How many legs do 15 spiders have? _____

What is the general expression for the number of legs on spiders? _____

4. **Mega-Challenge!** Solve this equation anyway you wish! $\frac{2(y - 3)}{6} + 1 = 4$