

Ollie's Leaf Puzzles: Patterns & Missing Numbers

Number patterns and unknown quantities

"Let's think it through," says Ollie. "A missing number is just a number in hiding — use what you know to find it."

Worked example. $25 + \square = 40$. Ask: 25 plus what makes 40? Use the inverse: $40 - 25 = 15$.
So $\square = 15$.

1. Find the number under the leaf.

a) $25 + \square = 40$ $\square =$ _____ b) $\square - 12 = 30$ $\square =$ _____

c) $60 - \square = 45$ $\square =$ _____

2. Continue each pattern and write the rule.

a) 3, 6, 9, 12, _____, _____ Rule: _____

b) 5, 10, 15, 20, _____, _____ Rule: _____

3. Write a different number sentence equal to $12 + 8$.

4. True or false? $15 + 5 = 12 + 8$. Explain.

5. Challenge: Pip's star pattern is 2, 4, 8, 16, ... What is the rule, and what comes next?
