

## Year 6 Algebra Homework

Q1.  $x + 2y = 20$

$x$  and  $y$  are whole numbers **less than 10**

What could  $x$  and  $y$  be?

Q2. What is the value of  $4x + 7$  when  $x = 5$ ?

Q3.  $2x + y = 20$

when  $x = 6$  what is the value of  $y$ ?

when  $y = 2$  what is the value of  $x$ ?

Q4. In this equation **N** stands for a number:

$$5N - 2 = 3N + 12$$

What is the value of **N**?

Q5. Find the value of **t** in this equation:  $4 + t = 9t$

Q6. **n** stands for a number:  $n + 7 = 13$

What is the value of  $n + 10$ ?

Q7. Find the value of **x** in this equation:  $6x - 27 = 0$

Q8. Fill in the **empty boxes** to complete the pattern.

$n + 6$		$7n + 6$
	$4n + 3$	$7n + 3$
$n$	$4n$	

**Extension questions:**

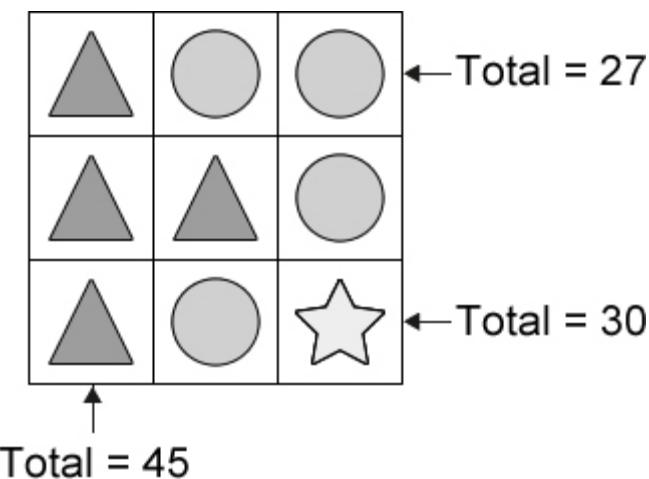
**Q9.** What is the value of  $t$  in this equation?

$$3t = t + 3$$

**Q10.** Find the value of  $y$  in the equation.

$$8 + y = 7 + 5y$$

**Q11.** Each shape stands for a number.



Work out the **value** of each shape.

**Q12.**

A theme park sells tickets online.

Each ticket costs £24

There is a £3 charge for buying tickets.

Which of these shows how to calculate the total cost, in pounds?

number of tickets  $\times$  3 + 24

number of tickets  $\times$  24 + 3

number of tickets + 3  $\times$  24

number of tickets + 24  $\times$  3