

**Age 11+ Level ★
Worksheet 1****1. Shape Sums**

In the set of equations below, how many Δ s are equal to \diamond ?

$$\Delta + \Delta = \square$$

$$\square + \Delta = \bigcirc$$

$$\diamond = \bigcirc + \square + \Delta$$

2. Partial Magic

In a magic square, each row, each column and both main diagonals have the same total.

In the partially completed magic square shown, what number should replace x ?

18			
13	15		
	10	11	17
	x	16	14

3. Seven Dwarfs

The Seven Dwarfs were born on the same day, in seven consecutive years. The ages of the youngest three add up to 42 years. What do the ages of the oldest three add up to?

4. Five-to

The number 2005 is the sum of a sequence of five consecutive positive integers. What is the smallest of these integers?

5. Interstellar

Which of the following numbers could replace x so that the value of $\frac{x}{5}$ lies between 3 and 4?

a) 3.2

b) 14

c) 19

6. Luis' Eight

Luis writes down eight consecutive positive integers. The sum of the three smallest numbers is 33. What is the sum of the three largest numbers?

These problems are adapted from UKMT (ukmt.org.uk) and WMC (competition.ac) problems.