

# Number Nest Weekly Challenge



## Warm up

1. Fill in the missing number: 23, 18, **13**, 8, 3, **-2**
2. What is  $8^3$ ? **512**
3. What is  $30 \times 9 - 45 \times 6$ ? **0**
4. Convert 2.5m to mm: **2500 mm**

## Activity

1. Jamie does the following chores with a 2 minute break in between each chore. If Jamie starts at 13:00, what time will he finish?

Laundry 40 mins

Washing the dishes 15 mins

Walking the dog 50 mins

$$40 + 2 + 15 + 2 + 50 = 109 \text{ mins} = 1 \text{ hour } 49 \text{ mins}$$

$$13:00 + 1 \text{ hour } 49 \text{ mins} = 14:49$$

2. Arrange these numbers from the smallest to the largest:

$$\frac{3}{4} \quad \frac{1}{2} \quad 0.749 \quad 0.3471 \quad -\frac{1}{5}$$
$$0.347 \quad 115\%$$

$$-\frac{1}{5} < 0.347 < 0.3471 < \frac{1}{2} < 0.749 < \frac{3}{4} < 115\%$$

3. Mrs Whiskers has two cats and eight kittens. Each of the two cats weighs four times as much as each kitten. Altogether the cats and kittens weigh 12 kg. How many kilograms does each kitten weigh?

**Altogether the cats and kittens weigh  $8 + 2 \times 4 = 16$  kittens.**

**Each kitten weighs  $12 \div 16 = \frac{3}{4}$  kg or 0.75 kg**

4. When 26 is divided by a positive integer N, the remainder is 2. What is the sum of all the possible values of n?

**N must be a factor of  $26 - 2 = 24$ .**

**Factors of 24 include:**

**1      24**

**2      12**

**3      8**

**4      6**

**However, 1 and 2 are also factors of 26 so the answer is  $3 + 4 + 6 + 8 + 12 + 24 = 57$**

### Puzzle

Fill in the missing numbers:

