



# Timester Challenge

## Reverse Averages



A magician is planning a magic trick with 4 cards numbered with some digits between 1-9, however he wants to make the pack biased.

He wants the mode of the 4 cards to be 7, the range to be 4 and a mean of 5.5.

Complete the cards with a possible solution.

<input type="text"/>	<input type="text"/>	<input type="text"/>	<input type="text"/>
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Bronze ★

Josie and five other women ran a race.

The times, in minutes, of the 5 other women are shown.

136    124    147    103    155

The mean time for all six women was 130.5 minutes.

Did Josie win the race.

You must show your working.

Silver ★

At a day care centre, the mean age of 8 children is  $3\frac{1}{8}$  years.

Kaye joins the nursery .

The mean age of all children is now 3 years.

Work out the age of Kaye.

Gold ★



# Timester Challenge

## Reverse Averages

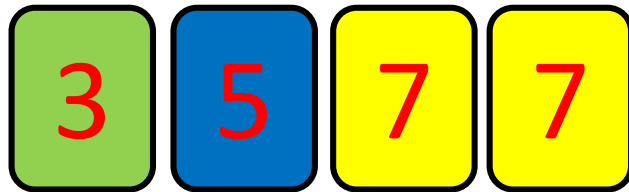
### Answers



A magician is planning a magic trick with 4 cards numbered with some digits between 1-9, however he wants to make the pack biased.

He wants the **mode** of the 4 cards to be **7**, the **range** to be **4** and a **mean** of **5.5**.

Complete the cards with a possible solution.



$$5.5 \times 4 = 22$$
$$(22 - 7 - 7 - 3 = 5)$$

Bronze ★

Josie and five other women ran a race.

The times, in minutes, of the 5 other women are shown.

136    124    147    103    155

The mean time for all six women was 130.5 minutes.

Did Josie win the race.

You must show your working.

$$136 + 124 + 147 + 103 + 155$$
$$= 665 \text{ minutes}$$

$$130.5 \times 6 = 783 \text{ minutes}$$

$$\text{Josie} = 783 - 665 = 118 \text{ minutes}$$

Silver ★

At a day care centre, the mean age of 8 children is  $3\frac{1}{8}$  years.

Kaye joins the nursery .

The mean age of all children is now 3 years.

Work out the age of Kaye.

$$3\frac{1}{8} \times 8 = 25 \text{ years}$$

$$3 \times 9 = 27 \text{ years}$$

$$\text{Kaye} = 27 - 25 = 2 \text{ years}$$

Gold ★