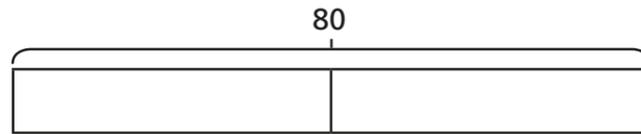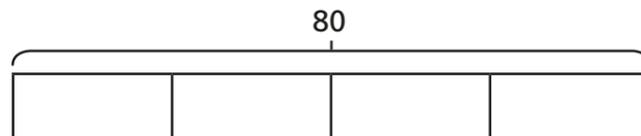# Find a percentage of a given amount using mental methods

1 Match the percentage calculations to the bar models.
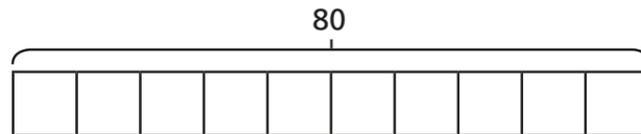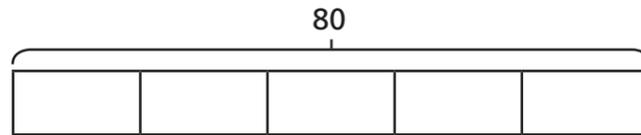
| 10% of 80 |

80

| 20% of 80 |

80

| 25% of 80 |

80

| 50% of 80 |

80

Explain how the models can help with each question.

2

To find 10% of a number you divide by 10, so to find 5% of a number you divide by 5

Is Amir correct? _____

Explain your reasoning.

_____

_____

3 Complete the calculations.

50% of £150 = [ ]   20% of £150 = [ ]

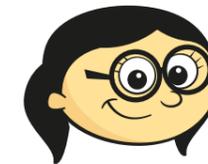25% of £150 = [ ]   10% of £150 = [ ]

75% of £150 = [ ]   5% of £150 = [ ]

4

To find 75% of a number, you can work out 25% and multiply this value by 3

How many other ways could you find 75% of a number?

5 Use the calculations on the right to help you work out the calculations on the left.

a) 3% of 1,020 = [ ]   1% of 1,020 = 10.2

b) 3% of 781 = [ ]   6% of 781 = 46.86

c) 70% of 4,320 = [ ]   7% of 4,320 = 302.4
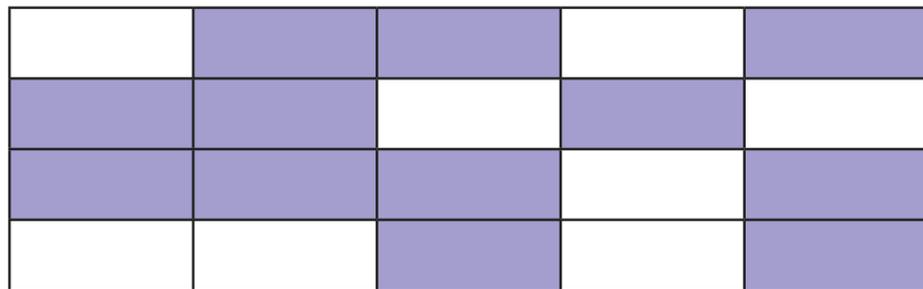
d) 95% of 120 = [ ]   5% of 120 = 6

e) 99% of 800 = [ ]   1% of 800 = 8

6 A rectangle is divided into identical smaller rectangles.

a) How many more rectangles need to be shaded so that 75% of the shape is shaded?

b) How many shaded rectangles need to be unshaded so that 50% of the shape is shaded?

c) How many more rectangles need to be shaded so that 5% of the shape is not shaded?

7 Ms Hall has £700 in her bank account.

She spends 45% of her money on rent.

How much money does she have left?

Ms Hall has ⬜ left.

8 Find the missing values.

⬜% of 60 = 15

⬜% of 30 = 15

⬜% of 120 = 15

9 a) Work out 95% of 800

b) What method did you use?

Could you have used a different method?

10 Find the missing numbers in these calculations.

a) 30% of ⬜ = $\frac{1}{3}$ of 90

b) 35% of 200 = 70% of ⬜

c) 40% of 120 = 20% of ⬜

d) $\frac{1}{5}$ of ⬜ = 80% of 36

11 Find the values of the shapes.

30% of 🔺 = ⬠

10% of ⬠ = 🟥

50% of 🟥 = 0.75

🔺 = ⬜   ⬠ = ⬜   🟥 = ⬜