5.1) Calculating probabilities

Worked example

Two fair spinners each have five sectors numbered 1 to 5. The two spinners are spun together and the sum of the numbers indicated on each spinner is recorded.
Find the probability of the spinners indicating a sum of:

a) exactly 6

b) more than 6

Your turn

Two fair spinners each have four sectors numbered 1 to 4. The two spinners are spun together and the sum of the numbers indicated on each spinner is recorded.
Find the probability of the spinners indicating a sum of:

a) exactly 5

b) more than 5

a) $\frac{1}{4}$

b) $\frac{3}{8}$

Worked example

The table shows the times taken, in minutes, for a group of students to complete a number puzzle.

Time, t (min)	$5 \leq t < 8$	$8 \leq t < 11$	$11 \leq t < 12$	$12 \leq t < 14$	$14 \leq t < 15$
Frequency	4	16	7	9	5

A student is chosen at random. Find the probability that they completed the number puzzle in:

a) under 12 minutes

b) over 9.5 minutes.

Your turn

The table shows the times taken, in minutes, for a group of students to complete a number puzzle.

Time, t (min)	$5 \leq t < 7$	$7 \leq t < 9$	$9 \leq t < 11$	$11 \leq t < 13$	$13 \leq t < 15$
Frequency	6	13	12	5	4

A student is chosen at random. Find the probability that they completed the number puzzle in:

a) under 9 minutes

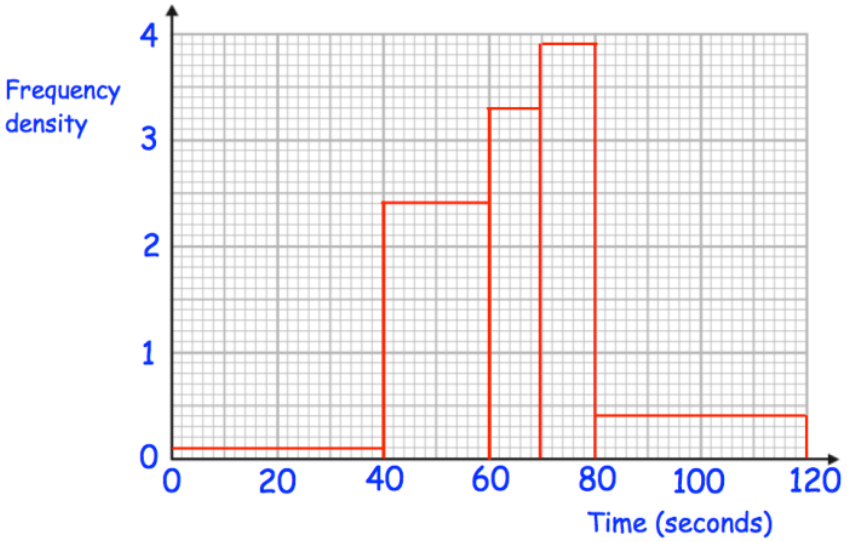
b) over 10.5 minutes.

a) $\frac{19}{40}$

b) $\frac{3}{10}$

Worked example

A participant is chosen at random.
What is the probability they took longer than 60 seconds?



Your turn

A participant is chosen at random.
What is the probability they weigh more than $14\ kg$?

$$\frac{14}{25} = 0.56$$