

**FOUNDATION TIER
MINI PRACTICE EXAM 11**



**CALCULATOR ALLOWED
20 MINUTES ALLOWED**

1.

Charlie has a spinner with four sections – green, yellow, red and blue.
The incomplete table below shows the probabilities of landing on each colour.

| | | | | |
|--------------------|-------|--------|-----|------|
| Colour | Green | Yellow | Red | Blue |
| Probability | 0.24 | 0.21 | 0.3 | 0.25 |

(a) Complete the table.

(1)

(b) Charlie is going to spin the spinner 50 times.

How many times would you expect him to land on green?

$$50 \times 0.24 = \underline{12}$$

(2)

2.

Donna weighs 65 kilograms, to the nearest kilogram.

Write down an error interval for Donna's weight.

$$64.5 \leq x < 65.5$$

(2)

3.

The frequency table below shows the amount of minutes that 80 shoppers spent in a supermarket.

| Time (minutes) | Frequency | Midpoint | F × MP |
|-----------------------|------------------|-----------------|---------------|
| $5 < x \leq 15$ | 12 | 10 | 120 |
| $15 < x \leq 25$ | 25 | 20 | 500 |
| $25 < x \leq 35$ | 22 | 30 | 660 |
| $35 < x \leq 45$ | 18 | 40 | 720 |
| $45 < x \leq 55$ | 3 | 50 | 150 |

(a) Estimate the mean number of minutes spent in the supermarket.

$$120 + 500 + 660 + 720 + 150 = 2150$$

$$2150 \div 80 = \underline{26.875}$$

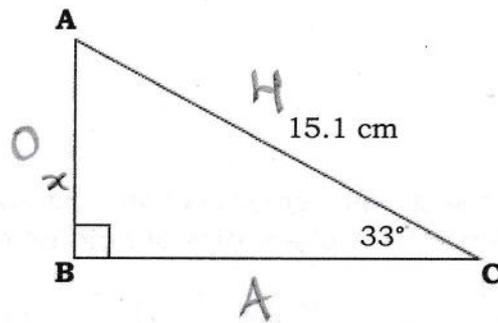
(4)

(b) Explain why your answer to part (a) is an estimate.

Because I used the midpoints.

(1)

4.
Find AB, to 2 significant figures.



S^o H

$$x = \sin 33 \times 15.1 = 8.2240 \dots$$

$$= \underline{8.2 \text{ cm}}$$

(4)

5.
A shop sells laptops and tablets from two manufacturers – Acer and Lenovo.
The shop has 60 laptops in stock.
Two fifths of the laptops are Acer laptops.
60% of the Acer items are laptops.
The shop has 55 Lenovo items in stock.

(a) How many items does the shop have in stock in total?

| | Laptops | Tablets | Total |
|--------|---------|---------|-------|
| Lenovo | 36 | 19 | 55 |
| Acer | 24 | 16 | 40 |
| Total | 60 | 35 | 95 |

$$\frac{2}{5} \text{ of } 60 = 24$$

$$60\% \text{ of } x = 24$$

$$x = 24 \div 60\%$$

$$= 40$$

95

(4)

(b) What percentage of the items in stock are Acer tablets? Give your answer to the nearest percent.

$$\frac{16}{95} \times 100 = 16.842 \dots \%$$

$$= \underline{17\%}$$

(2)