

Test 5: Non-calculator



Instructions

- A correct answer scores 1 mark, and an incorrect answer scores 0.
- Marks are not deducted for incorrect answers.
- No marks are given if more than one answer alternative is shaded.
- Choose the alternative which most correctly answers the question and shade in the box next to it.

QUESTION 1

If $m = 7$, what is the value of $2m$?

☒ 14

☐ 21

☐ 27

☐ 72

SHADE ONE BOX



QUESTION 2

What is another way of writing 5^3 ?

☐ 5×3

☒ $5 \times 5 \times 5$

☐ $5 + 5 + 5$

☐ $3 \times 3 \times 3 \times 3 \times 3$

SHADE ONE BOX



QUESTION 3

There are 12 marbles in a bag. Four of the marbles are blue and the rest are yellow. Casey chooses a marble from the bag without looking. What is the chance of her choosing a **yellow** marble, written in simplest terms?



WRITE YOUR OWN ANSWER

QUESTION 4

What is the answer to $0.96 \div 0.4$?

☐ 0.024

☐ 0.24

☒ 2.4

☐ 24

SHADE ONE BOX



QUESTION 5

$$\frac{1}{4} + \frac{7}{9} =$$

☐ $\frac{7}{36}$

☐ $\frac{8}{13}$

☐ $\frac{29}{36}$

☒ $1\frac{1}{36}$

SHADE ONE BOX



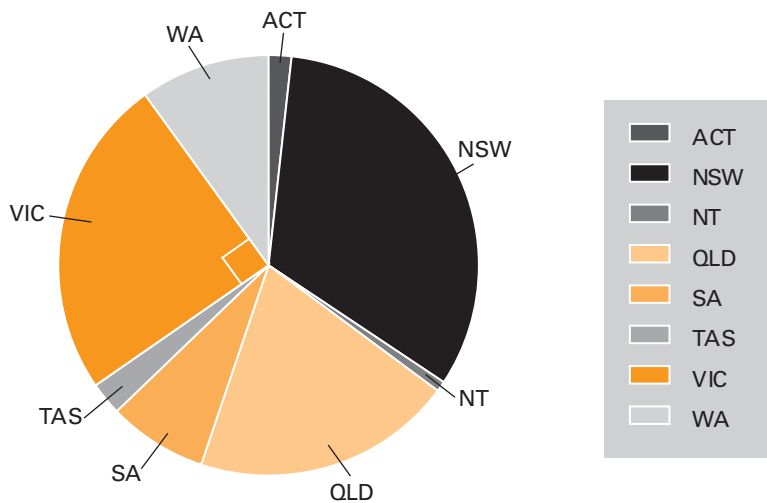
QUESTION 6

The pie chart below shows the number of people living in each Australian state and territory.

SHADE ONE BOX



Population of Australian states and territories



Which state's population represents approximately one quarter of Australia's total population?

- ☐ New South Wales
- ☒ Victoria
- ☐ Queensland
- ☐ Tasmania

QUESTION 7

Two glasses together contain 450 mL of milk. The first glass contains 70 mL less than the second glass. How much milk does the first glass contain?

SHADE ONE BOX



- ☒ 190 mL
- ☐ 260 mL
- ☐ 330 mL
- ☐ 380 mL

QUESTION 8

How many hours and minutes is it between 13:12 Monday and 07:25 Tuesday?

SHADE ONE BOX



- ☐ 17 h 13 min
- ☐ 17 h 37 min
- ☒ 18 h 13 min
- ☐ 18 h 37 min

QUESTION 9

SHADE ONE BOX

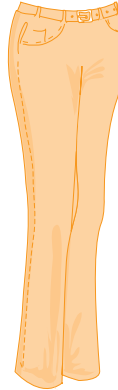
What is the best way to estimate the total cost of these four objects?



sunglasses
\$73



football
jersey
\$68



trousers
\$52



shoes
\$99

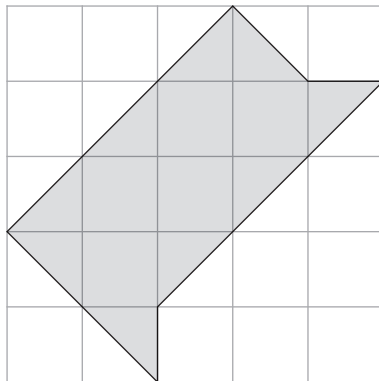
- ☐ $\$50 + \$60 + \$70 + \90
- ☐ $\$50 + \$60 \times 2 + \$90$
- ☒ $\$50 + \$70 \times 2 + \$100$
- ☐ $\$50 + \$60 + \$70 + \100

QUESTION 10



WRITE YOUR OWN ANSWER

What is the shaded area of this diagram, in square units?



= 1 square unit

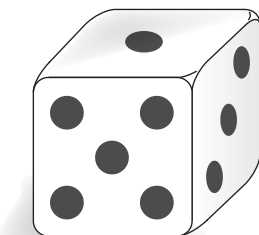
9.5

square units

QUESTION 11

SHADE ONE BOX

A regular six-sided die is rolled once. What is the chance of getting a number less than 3?



- ☐ impossible ☒ unlikely ☐ likely ☐ certain

QUESTION 12

Which letter does not have a line of symmetry?

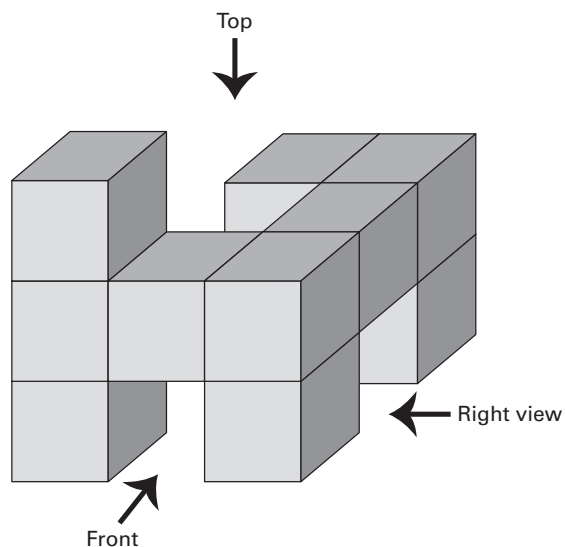
SHADE ONE BOX



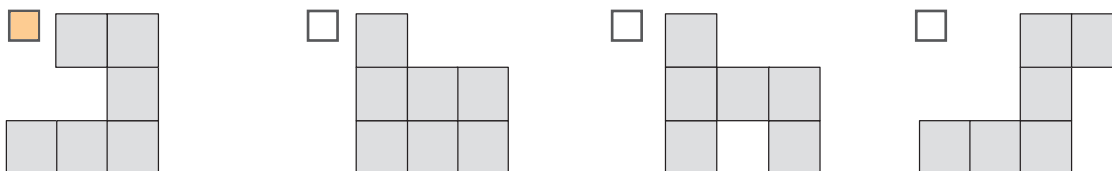
QUESTION 13

This object was made using identical cubes.

SHADE ONE BOX



Which drawing shows the view from the top?



QUESTION 14

What is the rule for the table of values shown below?

SHADE ONE BOX



m	3	4	5	6
n	13	18	23	28

- ☐ $n = 5 \times m - 2$
☐ $n = m + 5$
☐ $n = 2 \times m + 5$
☐ $n = 5 \times (m - 2)$

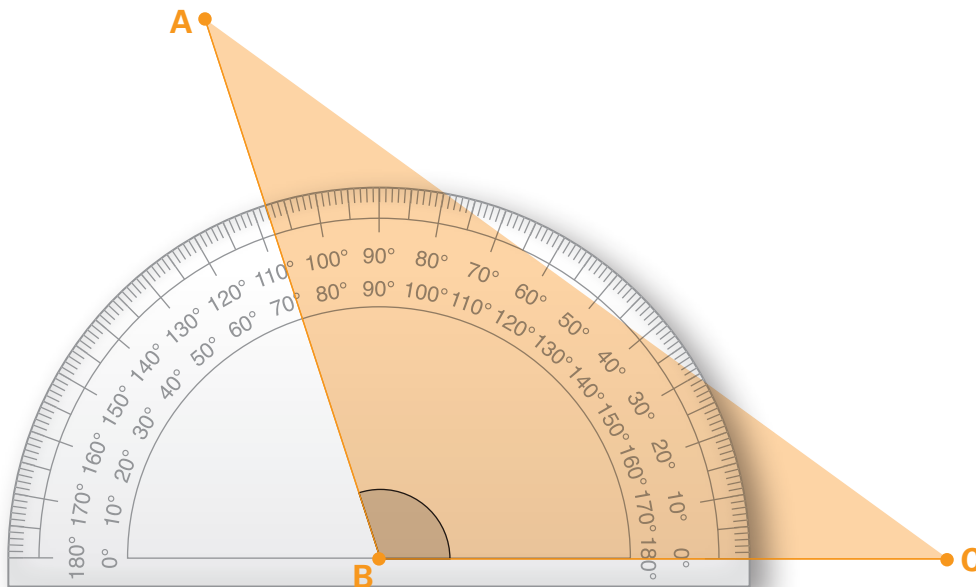
QUESTION 15



WRITE YOUR OWN ANSWER

What is the size of $\angle ABC$ in the diagram?

108 degrees



QUESTION 16

Which of the following is equivalent to $\frac{3}{5}$?

☐ 0.35

☒ 60%

☐ $\frac{15}{20}$

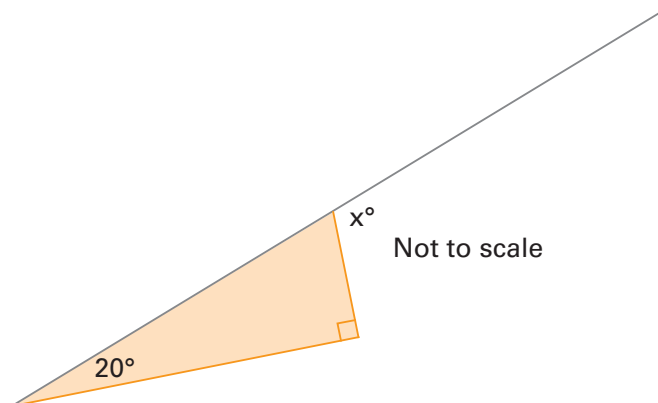
☐ $1\frac{2}{3}$

SHADE ONE BOX



QUESTION 17

From the diagram, what is the value of the angle marked x ?



☐ 20°

☐ 70°

☒ 110°

☐ 160°

SHADE ONE BOX



QUESTION 18

A car travels 12 km in 8 minutes. At this rate, how far will it travel in half an hour?

☒ 45 km

☐ 48 km

☐ 60 km

☐ 96 km

SHADE ONE BOX



QUESTION 19**WRITE YOUR OWN ANSWER**

What number can be used in both boxes to make these number sentences equal?

$$\square \times 6 + 2 = (\square - 2) \times 8$$

9

QUESTION 20**WRITE YOUR OWN ANSWER**

A school held its annual sports carnival. This table shows the points scored by each house.

Field event	House				
	Red	Blue	Green	Yellow	Purple
Javelin	15	20	14	12	17
Shot put	12	15	16	20	19
High jump	16	20	11	14	15
Long jump	13	14	20	17	18
Discus	17	18	16	18	20

Which house won the field events at the sports carnival?

Purple

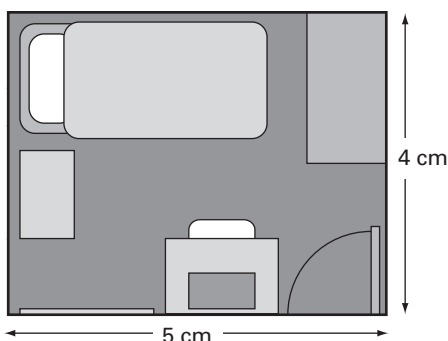
QUESTION 21**SHADE ONE BOX**

A tank contains 360 L of water. This represents 75% of the total capacity of the tank. How much water can the tank hold when full?

- ☐ 120 L
 ☐ 270 L
 ☒ 480 L
 ☐ 600 L

QUESTION 22**SHADE ONE BOX**

A bedroom has dimensions of 5 m × 4 m. The scale drawing of the bedroom is shown below.



What scale has been used in the drawing?

- ☐ 1 m represents 1 cm
☐ 1 m represents 2 cm
☒ 1 cm represents 1 m
☐ 1 cm represents 2 m

QUESTION 23

SHADE ONE BOX



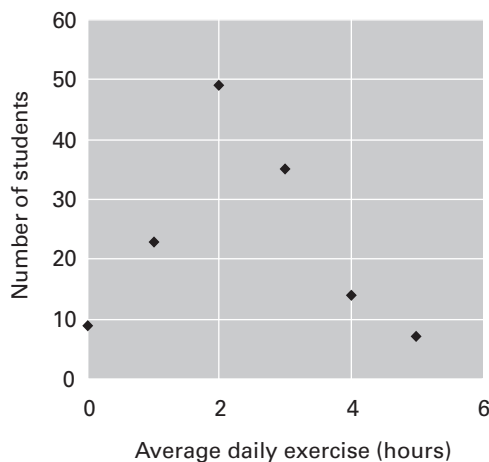
A survey of average hours of exercise per day was carried out by 100 Year 7 students from Johnston Secondary College. The results are tabulated below.

Average daily exercise (hours)	0	1	2	3	4	5
Number of Students	9	23	49	35	14	7

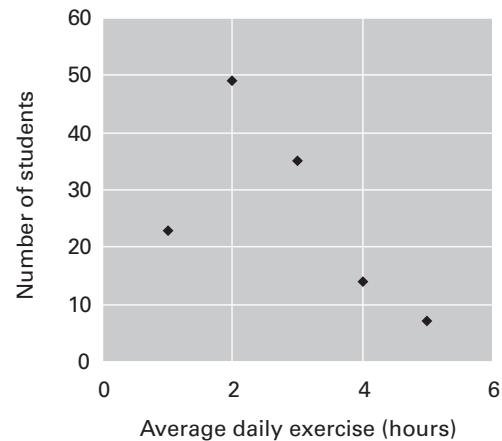
Which of the following is the graph that correctly represents this data?



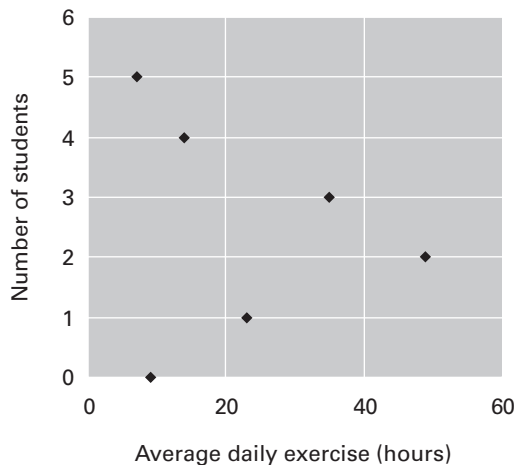
Daily exercise completed by Year 7 students



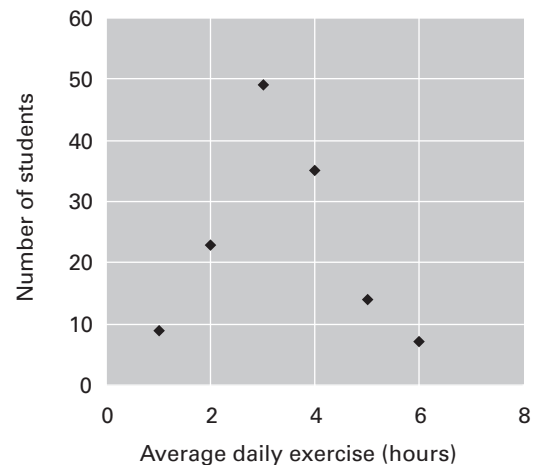
Daily exercise completed by Year 7 students



Daily exercise completed by Year 7 students



Daily exercise completed by Year 7 students



QUESTION 24

SHADE ONE BOX



Hayden is the captain of a team of 8 players. The team must score 112 points to win a competition. To win the competition, what is the lowest average (mean) number of points that each player must score?

☐ 13

☒ 14

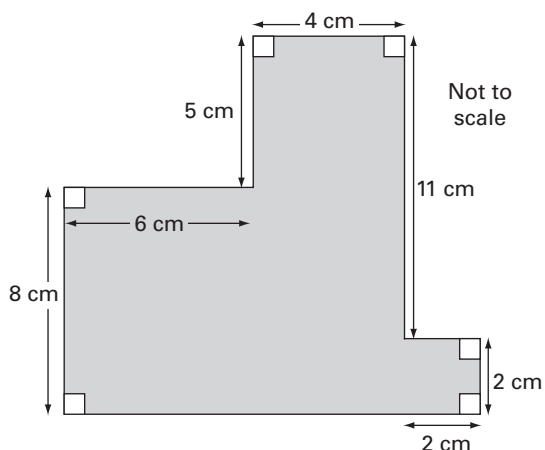
☐ 15

☐ 16

QUESTION 25

What is the perimeter of this shape?

SHADE ONE BOX



☐ 38 cm

☐ 46 cm

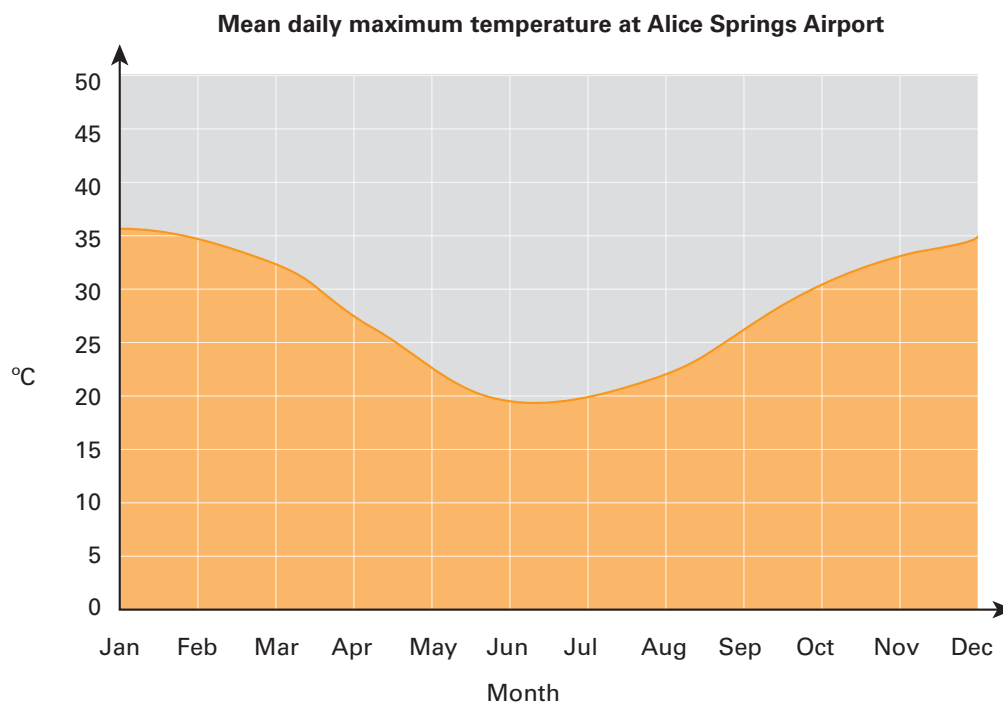
☒ 50 cm

☐ 67 cm

QUESTION 26

The graph below shows the average daily maximum temperature for Alice Springs, Northern Territory.

SHADE ONE BOX



(Source:weatherzone.com.au)

In which months did the average daily maximum temperature fall below 30°C?

☐ between May and August

☐ from January to March only

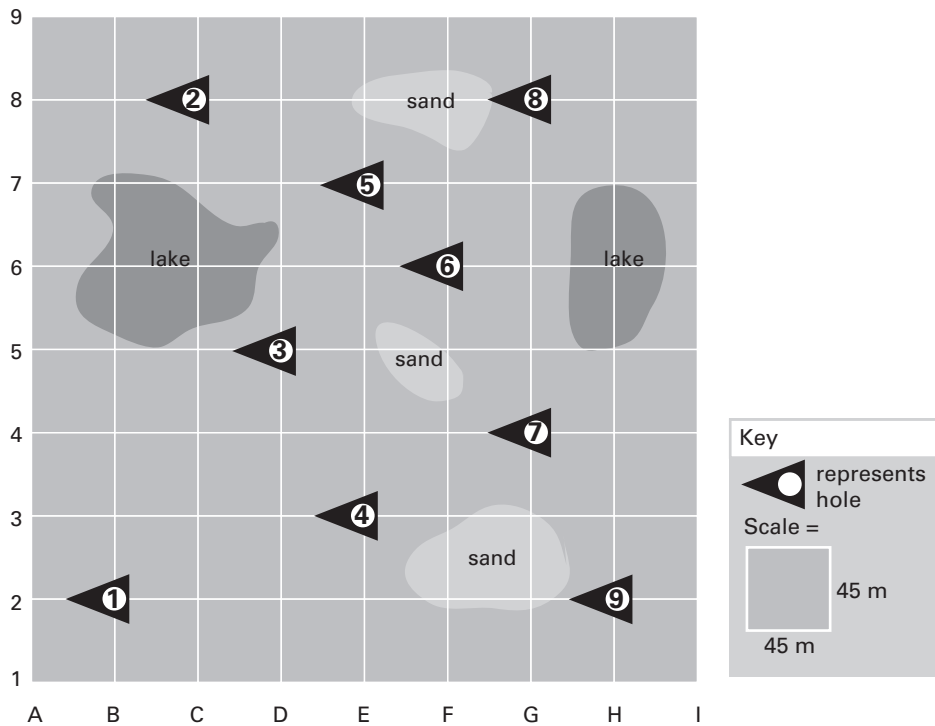
☒ between April and September

☐ from October to December only

QUESTION 27

SHADE ONE BOX

This is a map of a nine-hole golf course.



Which one of the following statements is correct?

- ☐ hole 9 is 225 m east of hole 1
- ☒ hole 4 is 180 m south of hole 5
- ☐ hole 7 is 135 m south of hole 8
- ☐ hole 8 is 160 m west of hole 2

QUESTION 28



WRITE YOUR OWN ANSWER

Laura shares some money equally among 8 friends, with each person receiving \$12. If Laura shares the same amount between 6 friends, how much money would each person receive?

\$

QUESTION 29

SHADE ONE BOX

This bar graph, drawn to scale, shows the favourite fruits of 160 customers at a fruit shop during a summer period.

Mango	Grapes	Berries	Melon	Peach
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How many customers preferred berries?

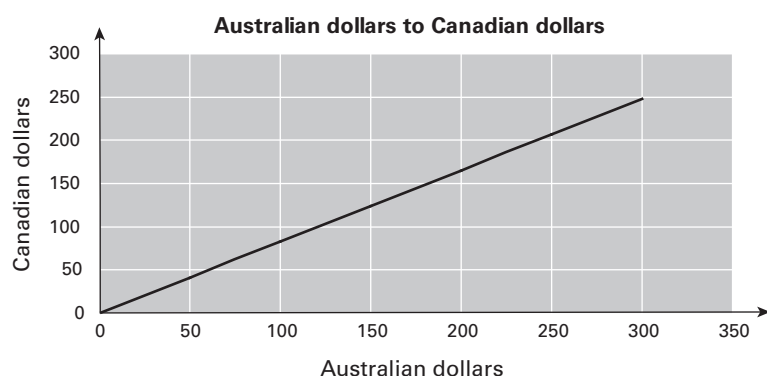
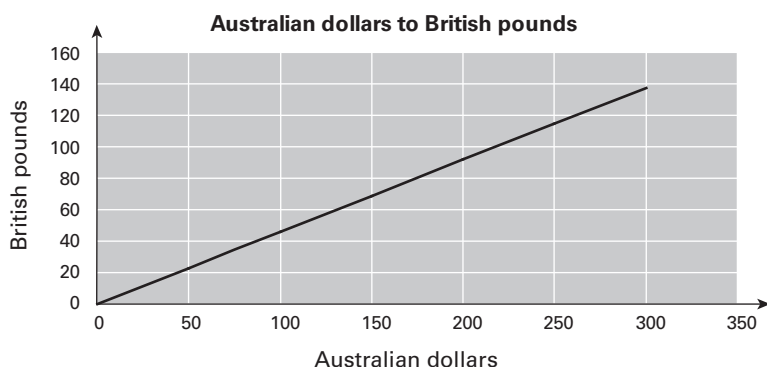
- ☐ 16 ☐ 30 ☒ 32 ☐ 48

QUESTION 30



WRITE YOUR OWN ANSWER

Olivia uses these two conversion graphs:



How many Canadian dollars are equal to 70 British pounds?

125

QUESTION 31



WRITE YOUR OWN ANSWER

This is an airport timetable for flights from Brisbane to other Australian cities:

Timetable of Flights		
Flight	Departure Times	Length of Flight
Brisbane to Canberra	8.30 a.m., 10.00 a.m., 1.30 p.m., 3.45 p.m.	1 h 50 min
Canberra to Adelaide	9.00 a.m., 11.15 a.m., 1.30 p.m., 5.30 p.m.	1 h 45 min
Adelaide to Brisbane	10.00 a.m., 1.45 p.m., 6.30 p.m., 7.15 p.m.	2 h 25 min

David lives in Brisbane and has a work meeting to attend today in Canberra. The meeting is at 11.00 a.m. in Canberra and will go for two hours. David will then fly to Adelaide for another meeting. This meeting will go for 2 h 30 min. What is the earliest time David will arrive back in Brisbane tonight?

8.55 p.m.

QUESTION 32



WRITE YOUR OWN ANSWER

Jennifer bought 240 g of chocolates. One quarter of the chocolates she bought contained nuts. White chocolate made up $\frac{1}{3}$ of the remaining chocolates. If Jennifer bought 96 g of dark chocolate, what fraction of the total amount of chocolate purchased was milk chocolate without nuts?

$\frac{1}{10}$