

**FOUNDATION TIER
MINI PRACTICE EXAM 8**



**NON-CALCULATOR
20 MINUTES ALLOWED**

1.
Dave says "If you multiply a number by 150 and then divide it by 20, it is the same as multiplying it by 7.5".
Is Dave correct? Explain your answer.

$$\frac{150}{20} = \frac{15}{2} = 7.5$$

Yes, because $150 \div 20 = 7.5$

(2)

2.
Of the fractions $\frac{7}{10}$ and $\frac{11}{15}$, which is closest in value to $\frac{2}{3}$?

$$\frac{7}{10} = \frac{21}{30}$$

$$\frac{2}{3} = \frac{20}{30}$$

$$\frac{11}{15} = \frac{22}{30}$$

$$\left(\frac{7}{10} \right)$$

(2)

3.
The 51 bus departs the bus station every 20 minutes.
The 52 bus departs the bus station every 12 minutes.
The first 51 bus departs the bus station at 6:50.
The first 52 bus departs the bus station at 7:02.

(a) At what time will a 51 and 52 bus first depart the bus station at the same time?

51: 6:50, 7:10, 7:30, 7:50, 8:10

52: 7:02, 7:14, 7:26, 7:38, 7:50

7:50

(2)

(b) Callum got on the 51 bus at 8:30 and got off the bus at 8:50.
He travelled a total of 5 miles.

Work out the bus's average speed for Callum's journey, in miles per hour.

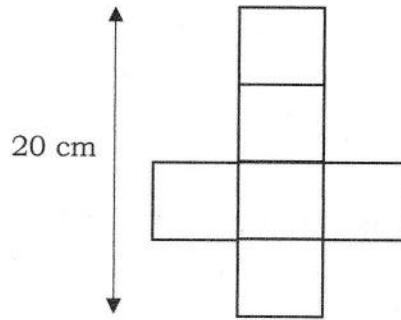
Distance = 5 miles

Time = 20 mins = $\frac{1}{3}$ hours

Speed = $5 \div \frac{1}{3} = 5 \times 3 = \underline{15}$ miles per hour

(3)

4.
Pictured below is a net of a cube.



Work out the volume of the cube.

$$20 \div 4 = 5 \quad 5 \times 5 \times 5 = \underline{125 \text{ cm}^3}$$

(3)

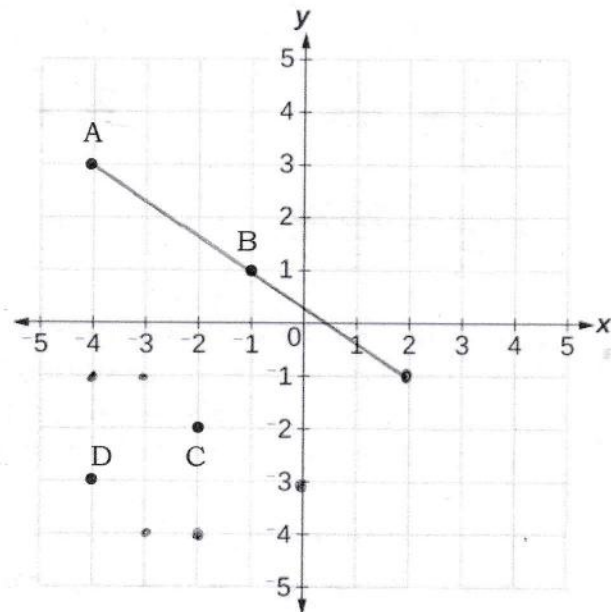
5.
(a) B is the midpoint of point A and point E.
Find the co-ordinates of point E.

$$(2, -1)$$

- (b) DCF is an isosceles triangle.
Write down two possible co-ordinates of point F.

$$(-4, -1) \text{ or } (-3, -1) \text{ or } (-3, -4) \\ \text{or } (-2, -4) \text{ or } (0, -3)$$

(2)



(2)

6.
Courtney is organising a holiday for her and four friends.
The flights will cost £28 each way per person.
The hotel rooms cost £45 per night.
The friends will each have one room.
They will stay for 5 nights.

The group have budgeted ~~£500~~^{£1,500} for the holiday.
Have they budgeted enough? Show all your working.

$$\text{Flights} = 28 \times 5 \times 2 = \text{£}280$$

$$\text{Hotel} = 45 \times 5 \times 5 = \text{£}1,125$$

$$\begin{array}{r} 45 \\ \times 25 \\ \hline 225 \\ 900 \\ \hline 1125 \end{array}$$

$$\begin{array}{r} 1,125 \\ 280 + \\ \hline 1,405 \\ \hline \end{array}$$

Yes

(4)