

**EDEXCEL 1387**  
**Summer 2004**  
**FOUNDATION SOLUTIONS**  
**Paper 1 (Non-calculator)**

1.

Ken → £1020

Lisa → £8.06

2.

(a) 28, 33

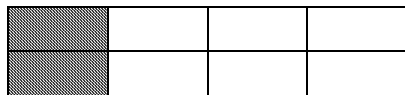
(b) The difference between each number is 5

(c) The numbers in the sequence will end with a 3 or a 8

3.

(a) (i)  $\frac{4}{8}$  which when simplified becomes  $\frac{1}{2}$

(ii)



(b) The way you work these out is as follows → Look at the example,  $12 - 6 = 6$

→  $6 \div 2 = 3$  →  $6 + 3 = 9$

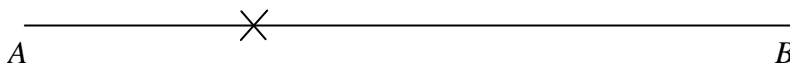
(i)  $60 - 20 = 40$  →  $40 \div 2 = 20$  →  $20 + 20 = 40$

(ii) 150,000

(iii) 6.55

(iv)  $\frac{3}{8}$

(c)



4.

(a) (i) Metres

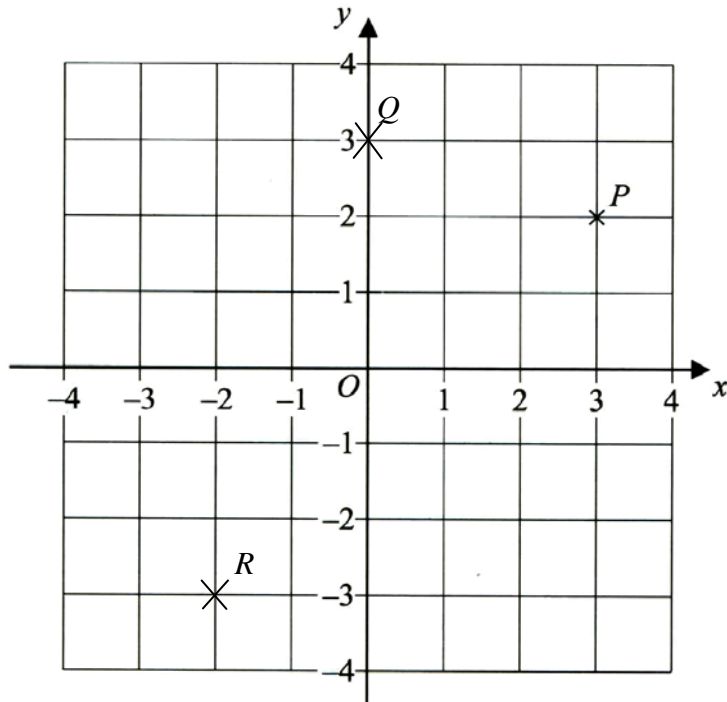
(ii) Grams

(b) Miles

5.

(a) (3, 2)

(b) (i)/(ii) See graph



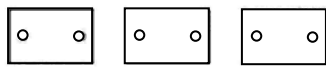
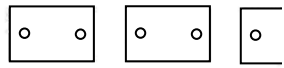
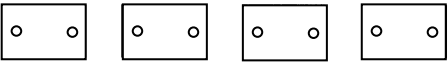
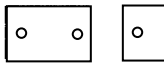
6.

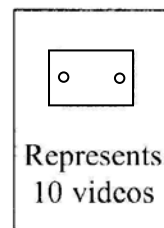
(a) (i) 3 pictures, 1 picture is worth 10 videos  $\rightarrow 3 \times 10 = 30$

(ii)  $2\frac{1}{2}$  pictures, 1 picture is worth 10 videos so  $\frac{1}{2}$  a picture must be worth

5 videos  $\rightarrow 10 + 10 + 5 = 25$

(b) See pictogram

Monday	
Tuesday	
Wednesday	
Thursday	



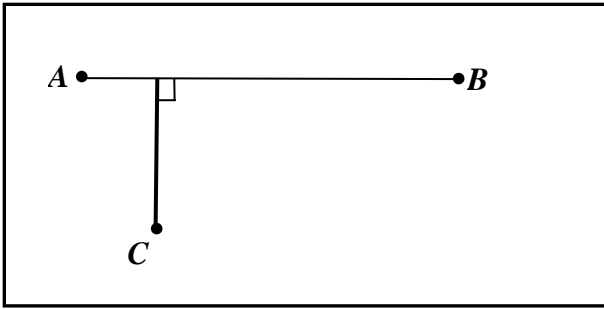
7.

(a)  $(3 \times 10) + 0 = 30$

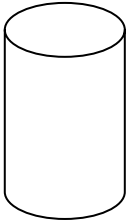
(b)  $(3 \times 20) + 5 = 65$

8.

(a) The line from C has to meet AB at  $90^\circ$



(b)



9.

(a) Basically you just have to work out  $26 \times 32.9$ , there are various ways to do this

→ You could do  $(10 \times 32.9) + (10 \times 32.9) + (6 \times 32.9) \rightarrow 10 \times 32.9$ , this just moves the decimal place 1 place to the right → 329, so now you have  $(329) + (329) + (6 \times 32.9)$

$$\begin{array}{r} 32.9 \\ \times \quad 6 \\ \hline 197.4 \\ \hline 1 \quad 5 \end{array} \longrightarrow \begin{array}{r} 329 \\ + 329 \\ \hline 197.4 \\ \hline 855.4 \\ \hline 1 \quad 2 \end{array}$$

(b) 10 crates will be 690kg, 12 will be 828kg, 14 will be 966kg and 15 will be 1035kg  
so the answer is 14.

10.

(a) (i)  $7^\circ\text{C}$

(ii)  $-10^\circ\text{C}$

(b) (i) Remember to work out the difference you take the highest number and subtract the smaller number from it →  $-4 - (-10) = 6^\circ\text{C}$

(ii)  $6 - (-2) = 8^\circ\text{C}$

(c) This is saying  $-2 - 5 = -7^\circ\text{C}$

11.

(a) B and D

(b) (i) A

(ii) 3

12.

- (a) If there are 800 students and 144 were absent then  $800 - 144$  were not absent  
→ 656 students
- (b) 25% or  $\frac{1}{4}$  of 800 is 200,  $144 < 200$  so Trudy is incorrect
- (c) 1% of 800 is 8 so 45% of 800 will be  $45 \times 8 \rightarrow 360$
- (d)  $\frac{176}{800}$ , you are trying to simplify this so it will look like  $\frac{?}{100} \rightarrow$  How did I manage to change 800 to 100? → By dividing by 8, so divide 176 by 8 → 22  
→  $\frac{22}{100} \rightarrow$  Which means 22%

13.

- (a) (i) 25 (This is  $5^2$ )  
(ii) 28 (This is in the 7 times table ( $4 \times 7$ ))  
(iii) 5 and 20  
(iv) 26 and 33 ( $26 + 33 = 59$ )
- (b)  $2 \times 3$  is 6 but  $2^3$  means  $2 \times 2 \times 2$  which is 8

14.

To work out the area of a rectangle, you use the formula 'length  $\times$  width' →  $5m \times 2m$   
→  $10m^2$

15.

- (a)  $\frac{5}{6}$  is the same as  $\frac{10}{12} \rightarrow \frac{11}{12} - \frac{10}{12} = \frac{1}{12}$
- (b)  $\frac{70 \times 400}{200} \rightarrow \frac{28000}{200} \rightarrow \frac{280}{2} \rightarrow 140$

16.

- (a)  $2y$
- (b) There are 3 lots of  $p^2 \rightarrow 3p^2$
- (c)  $x$  is common so take it out →  $x(x - 3)$

17.

(a)

	France	Germany	Spain	Total
Female	$17 - 15 = 2$	$34 - (9 + 2) = 23$	9	34
Male	15	$25 - 23 = 2$	$18 - 9 = 9$	$60 - 34 = 26$
Total	$60 - (25 + 18) = 17$	25	18	60

- (b) 25 out of 60 students visited Germany →  $\frac{25}{60}$

18.

(a) (i) Angles in a triangle add up to  $180^\circ \rightarrow 180 - (60 + 60) \rightarrow 60^\circ$

(ii) All the angles are equal which therefore makes all the lengths equal

(b) (i)/(ii) If  $SQ = SR$  then angle  $SQR = SRQ$  (isosceles triangle)  $\rightarrow SQR = 50^\circ$

Angles on a straight line always add up to  $180^\circ \rightarrow 180 - 50 = 130^\circ$

(c)  $y^\circ = 64^\circ$  due to 'Z' angles (Alternate angles)

19.

Goals scored ( $x$ )	Number of students ( $f$ )	( $fx$ )
1	9	$9 \times 1 = 9$
2	3	6
3	5	15
4	3	12
	Total = 20	Total = 42

(a) Modal means the most common  $\rightarrow 1$

(b) Range means the highest – lowest  $\rightarrow 4 - 1 = 3$

(c) The formula to work out the mean is  $\frac{\sum fx}{\sum f} \rightarrow \frac{42}{20} \rightarrow 2 \frac{2}{20} \rightarrow 2 \frac{1}{10}$

$\rightarrow 2.1$

20.

(a) Where does the distance – time graph start on the  $x$  axis?  $\rightarrow 0905$

(b) Anil arrived at the park at 0935, therefore the distance is  $7km - 0km \rightarrow 7km$

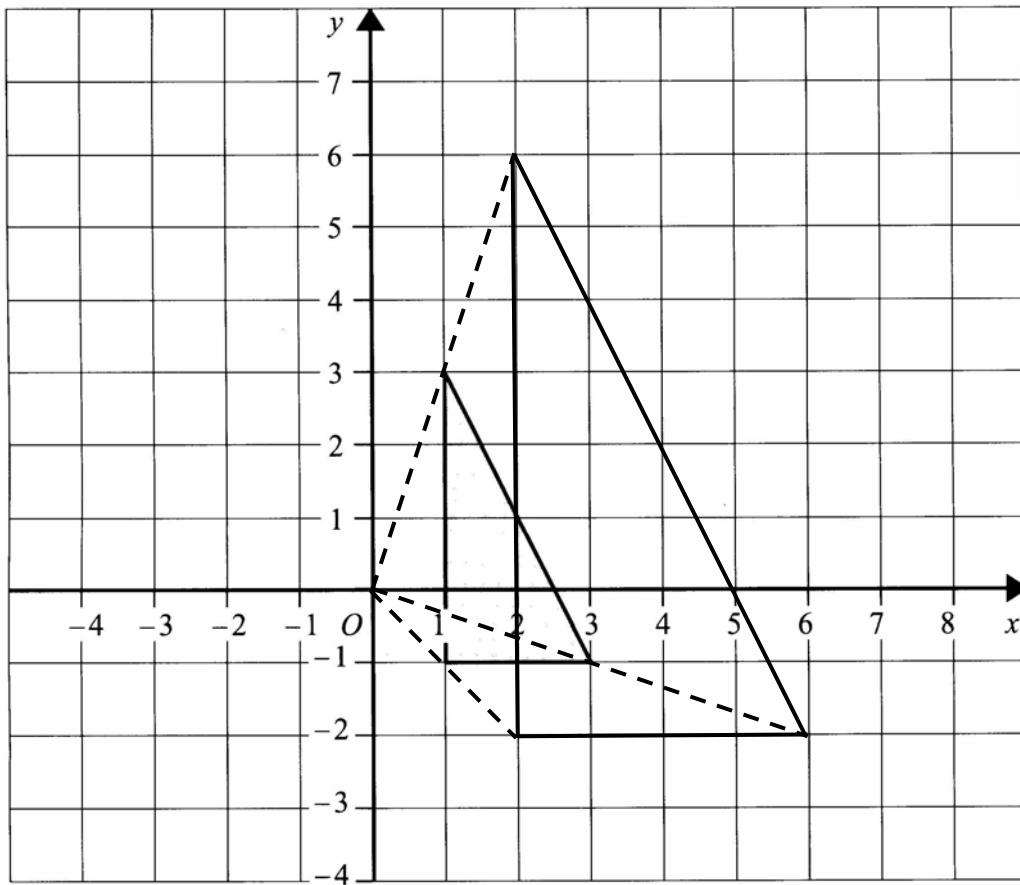
(c) Anil waited from 0935 to 0945  $\rightarrow 10$  minutes

(d) Anil left the park at 0945 and arrived back at 1005  $\rightarrow 20$  minutes :  $7km$

To find his speed in  $km/h$ , then all we need to do is multiply both sides by 3

$\rightarrow 60$  minutes :  $21km \rightarrow 21km/h$

21.



22.

- (a) Remember vertices means corners  $\rightarrow 8$   
(b) 5 sides  $\rightarrow$  Pentagon  
(c) How many *mm* in a *cm*? 10  $\rightarrow$  Divide your answer by  $10^2$   
 $\rightarrow 85.6\text{cm}^2$

23.

Angles in a quadrilateral add up to  $360^\circ$ , so using this fact we can say,  
 $360^\circ = 47 + 100 + 2x + x \rightarrow 360^\circ = 147 + 3x \rightarrow 3x = 360 - 147 \rightarrow 3x = 213^\circ$   
 $x^\circ = 71 \rightarrow$  The largest angle will be  $2x$  which is  $2 \times 71 = 142^\circ$

END OF PAPER 1 SOLUTIONS