

1. Nassim buys petrol from his local garage.

On Monday, he filled up his tank.

On Tuesday, his tank was $\frac{3}{4}$ full.

(a) What fraction of the full tank of petrol had he used?

..... (1)

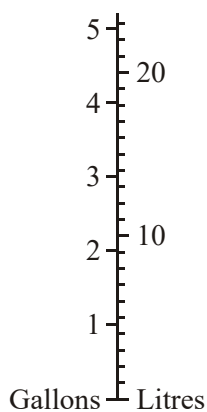
(b) Write $\frac{3}{4}$ as a decimal.

..... (1)

(c) Write $\frac{3}{4}$ as a percentage.

..... (1)

The garage has a diagram for converting gallons to litres.



(d) Use the diagram to convert

(i) 2 gallons to litres,

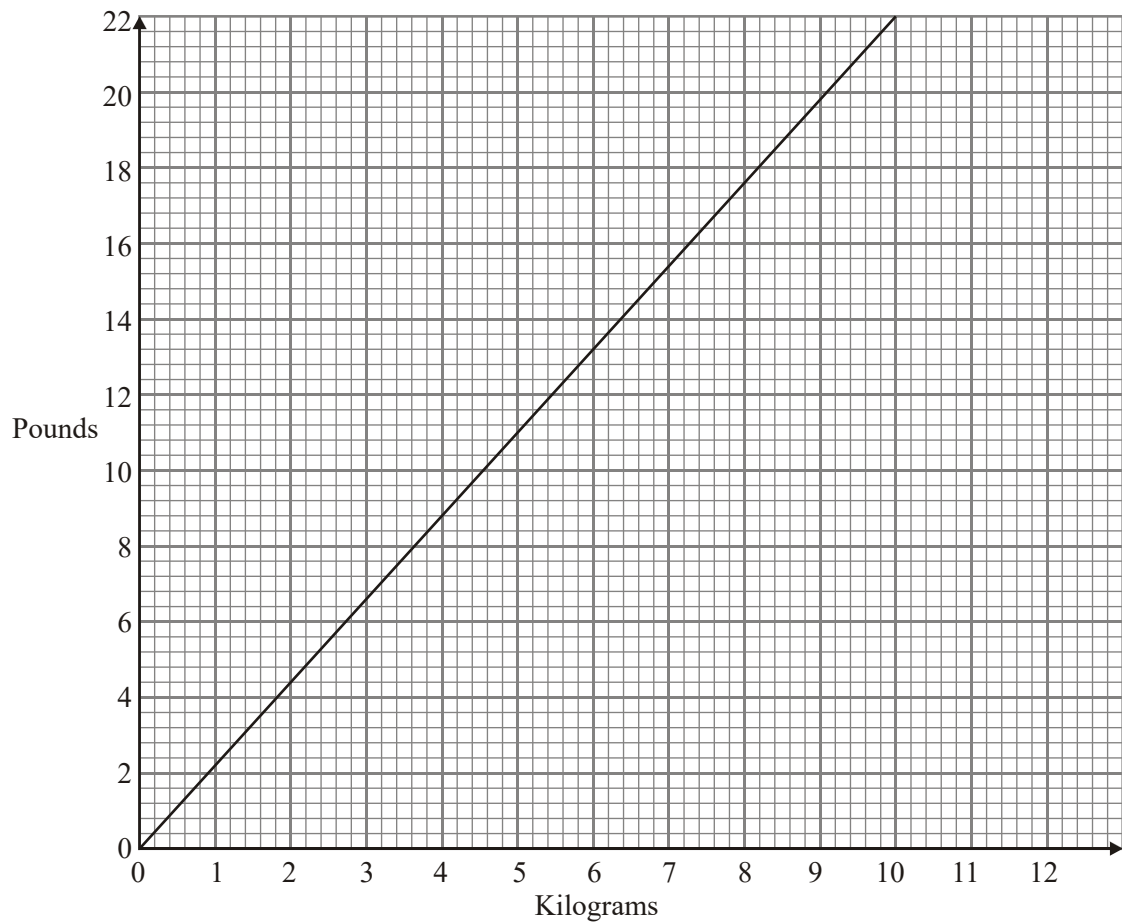
..... litres

(ii) 3.5 gallons to litres.

..... litres

(2)
(Total 5 marks)

2.



The conversion graph above can be used for changing between kilograms and pounds.

- (a) Use the graph to change 22 pounds to kilograms.

..... kg (1)

- (b) Use the graph to change 2.5 kilograms to pounds.

..... pounds (1)

Firoza weighs 110 pounds.

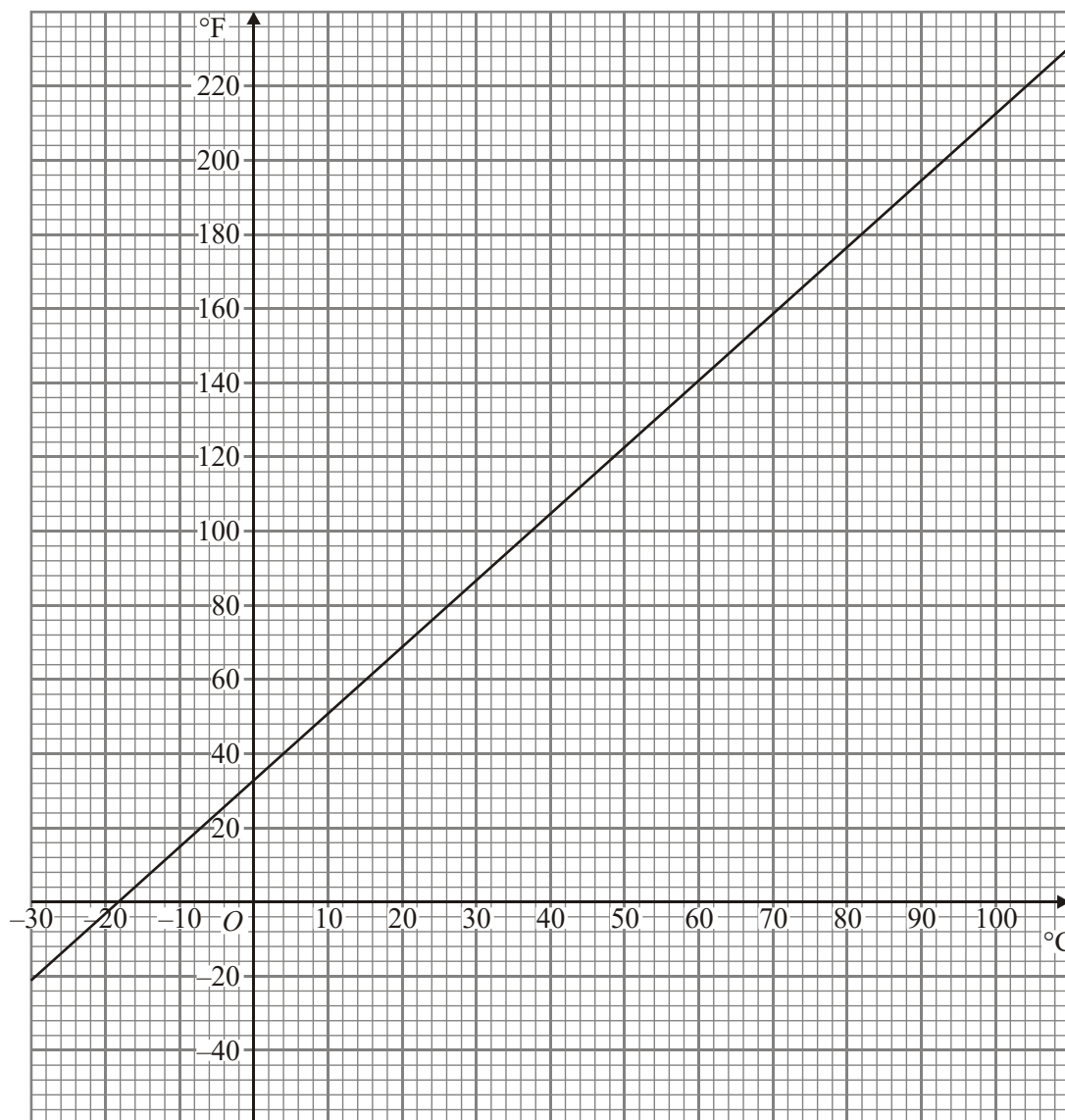
- (c) Change 110 pounds to kilograms.

..... kg (3)
(Total 5 marks)

3. Change 28 miles to kilometres.

..... km (Total 2 marks)

4. The graph below can be used to convert between two temperature scales, Fahrenheit ($^{\circ}\text{F}$) and Celsius ($^{\circ}\text{C}$).



- (a) Use the graph to convert 50°F to degrees Celsius.

..... $^{\circ}\text{C}$

(1)

(b) Use the graph to convert $-10\text{ }^{\circ}\text{C}$ to degrees Fahrenheit.

..... $^{\circ}\text{F}$

(1)
(Total 2 marks)

5. Predeep bought a necklace in the United States of America.
Predeep paid 108 dollars (\$).

Arthur bought an identical necklace in Germany.
Arthur paid 117 Euros (€)

$\text{£}1 = \$1.44$
$\text{£}1 = 1.6\text{ €}$

Calculate, in pounds, the difference between the prices paid for the two necklaces.
Show how you worked out your answer.

£

(Total 5 marks)

6. A student bought a pair of sunglasses in the USA.
He paid \$35.50
In England, an identical pair of sunglasses costs £26.99
The exchange rate is £1 = \$1.42

In which country were the sunglasses cheaper, and by how much? Show all your working.

.....
(Total 3 marks)

7. Fred went on holiday to France.
He changed £475 to Euros.
£1 = 1.57 Euros.

(a) Change £475 to Euros.

..... Euros

(2)

In France, Fred went to a festival.
 There were 650 people at the festival.
 16% of the people at the festival were British.

(b) Work out 16% of 650

.....
 (2)
 (Total 4 marks)

8. (a) Complete the table by writing a sensible metric unit on each dotted line.
 The first one has been done for you.

The distance from London to Birmingham	179 kilometres
The weight of a twenty pence coin	5
The height of the tallest living man	232
The volume of lemonade in a glass	250

(3)

(b) Change 5000 metres to kilometres.

.....km
 (1)
 (Total 4 marks)

9. The table can be used to convert between Euros (€) and Pounds (£).

Euros (€)	Pounds (£)
0.10	0.08
0.20	0.16
0.50	0.40
1	0.80
2	1.60
3	2.40
4	3.20

- (a) Change €3 to pounds.

£.....

(1)

- (b) Change €2.50 to pounds.

£.....

(2)

- (c) Change £1 to euros.

€.....

(2)

(Total 5 marks)

10. Alison travels by car to her meetings.

Alison's company pays her 32p for each mile she travels.

One day Alison writes down the distance readings from her car.

Start of the day: 2430 miles

End of the day: 2658 miles

- (a) Work out how much the company pays Alison for her day's travel.

£.....

(4)

The next day Alison travelled a total of 145 miles.

She travelled $\frac{2}{5}$ of this distance in the morning.

(b) How many miles did she travel during the rest of the day?

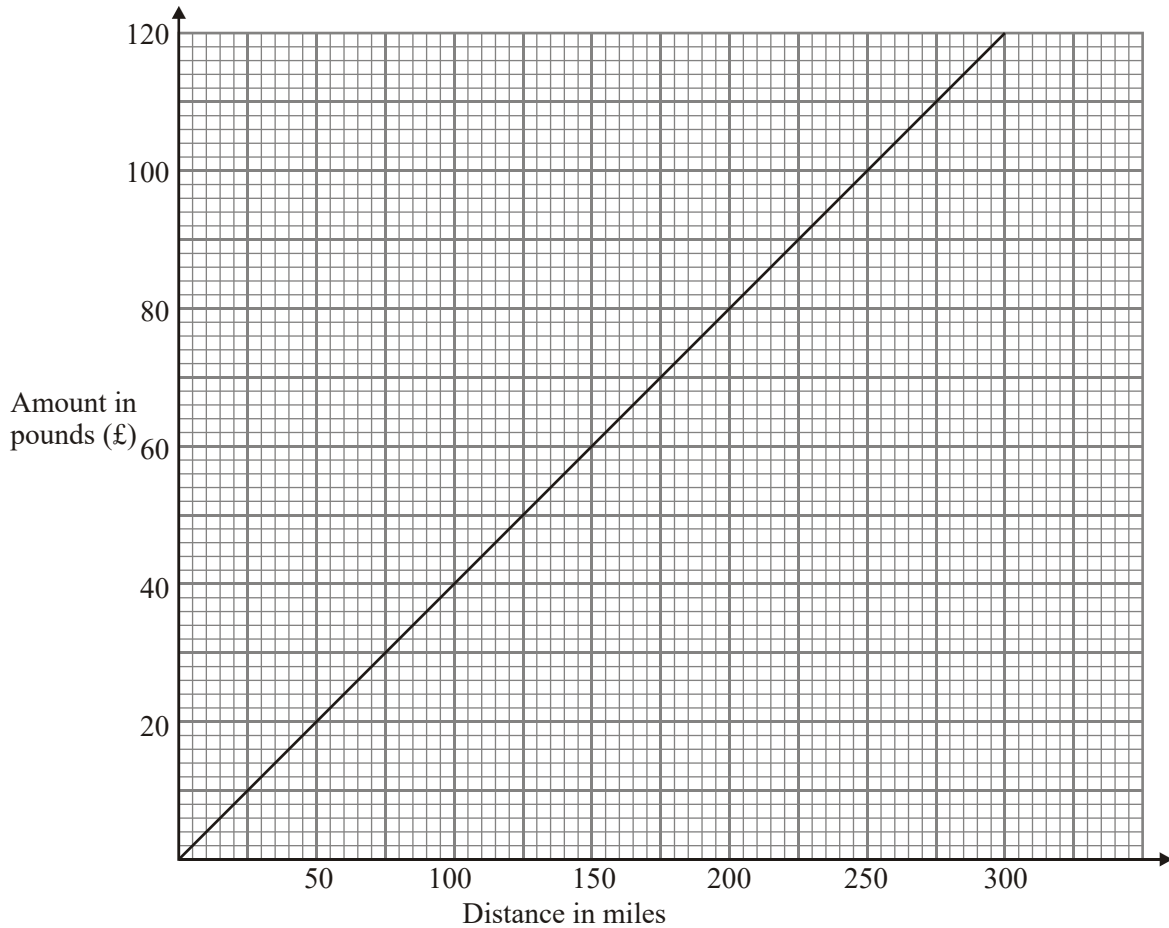
.....miles

(3)

Tom also travels by car to his meetings.

Tom's company works out the amount it will pay him for the distance he travels.

It uses the graph below.



(c) Use the graph to write down

(i) the amount Tom's company pays him when he travels 200 miles,

£.....

(ii) the distance Tom travels when his company pays him £50.

.....miles

(2)

(Total 9 marks)

11. Margaret goes on holiday to Switzerland.
The exchange rate is £1 = 2.10 francs.
She changes £450 into francs.
How many francs should she get?

.....francs
(Total 2 marks)

12. Margaret goes on holiday to Switzerland.
The exchange rate is £1 = 2.10 francs.
She changes £450 into francs.
(a) How many francs should she get?

.....francs
(2)

In Switzerland, Margaret buys a railway ticket.

The cost of the railway ticket is 63 francs.

(b) Work out the cost of the ticket in pounds.

£.....

(2)

(Total 4 marks)

13. Sangita is on holiday in Switzerland.
She buys a train ticket.

She can pay either 100 Swiss Francs or 70 Euros.

$$£1 = 2.10 \text{ Swiss Francs}$$

$$£1 = 1.40 \text{ Euros}$$

She pays in Swiss Francs rather than Euros.
Work out how much she saves.
Give your answer in pounds.

£

(Total 4 marks)

14. (a) Complete this table.
Write a sensible unit for each measurement.
Three have been done for you.

	Metric	Imperial
The length of your finger	inches
The distance between America and England	kilometres
The amount of petrol in a petrol tank	gallons

(3)

(b) Change 3 metres to centimetres.

..... cm

(1)

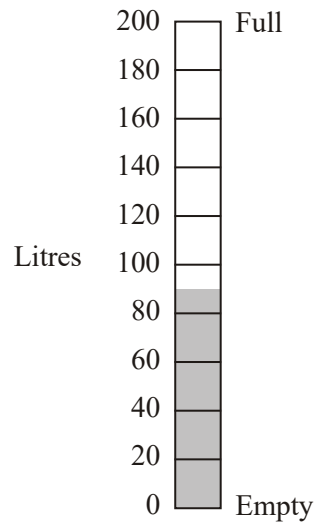
(c) Shalim says 1.5 km is less than 1400 m.
Is he right?
Explain your answer.

.....
.....

(1)

(Total 5 marks)

15.



The scale shows how much water there is in a tank.

(a) Write down an estimate for the number of litres of water in the tank.

..... litres

(1)

The tank holds 200 litres when full.
 Bill adds water to the tank until it is full.

(b) Work out the number of litres of water he adds.

..... litres (1)

(c) (i) How many litres are there in 1 gallon?

..... litres

(ii) Change 200 litres to gallons.
 Give your answer to the nearest gallon.

..... gallons (2)
 (Total 4 marks)

16. (a) Complete the table by writing a sensible **metric** unit for each measurement.
 The first one has been done for you.

The length of the river Nile	6700kilometres.....
The height of the world's tallest tree	110
The weight of a chicken's egg	70
The amount of petrol in a full petrol tank of a car	40

(3)

(b) Change 4 metres to centimetres.

..... cm (1)

(c) Change 1500 grams to kilograms.

..... kg (1)
(Total 5 marks)

17.



The picture shows a man standing next to a flagpole.
The man is of normal height.
The man and the flagpole are drawn to the same scale.

(a) Write down an estimate for the height, in metres, of the man.

..... m (1)

- (b) Work out an estimate for the height, in metres, of the flagpole.

..... m
 (2)
 (Total 3 marks)

18. (a) Write down a sensible **metric** unit for measuring

- (i) the distance from London to Paris,

.....

- (ii) the amount of water in a swimming pool.

.....

(2)

- (b) (i) Change 5 centimetres to millimetres.

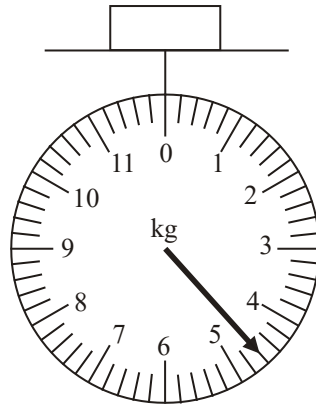
..... mm

- (ii) Change 4000 grams to kilograms.

..... kg

(2)
 (Total 4 marks)

19.



(a) Write down the weight in kg shown on this scale.

..... kg (1)

(b) (i) How many pounds are there in 1 kg?

..... pounds (1)

The weight of a baby is 5 kg.

(ii) Change 5 kg to pounds.

..... pounds (1)
(Total 3 marks)

20. Sarah went to Germany.

She changed £300 into euros.
 The exchange rate was £1 = 1.64 euros.

(a) Work out the number of euros Sarah got.

..... euros (2)

Sarah came home.
 She had 119 euros left.
 The new exchange rate was £1 = 1.50 euros.

(b) Work out how much Sarah got in pounds for 119 euros.

£..... (2)
 (Total 4 marks)

21. (a) Write down the name of a **metric** unit which is used to measure

(i) the distance from London to Brighton,

.....

(ii) the weight of a bar of soap.

.....

(2)

(b) (i) Change 240 millimetres to centimetres.

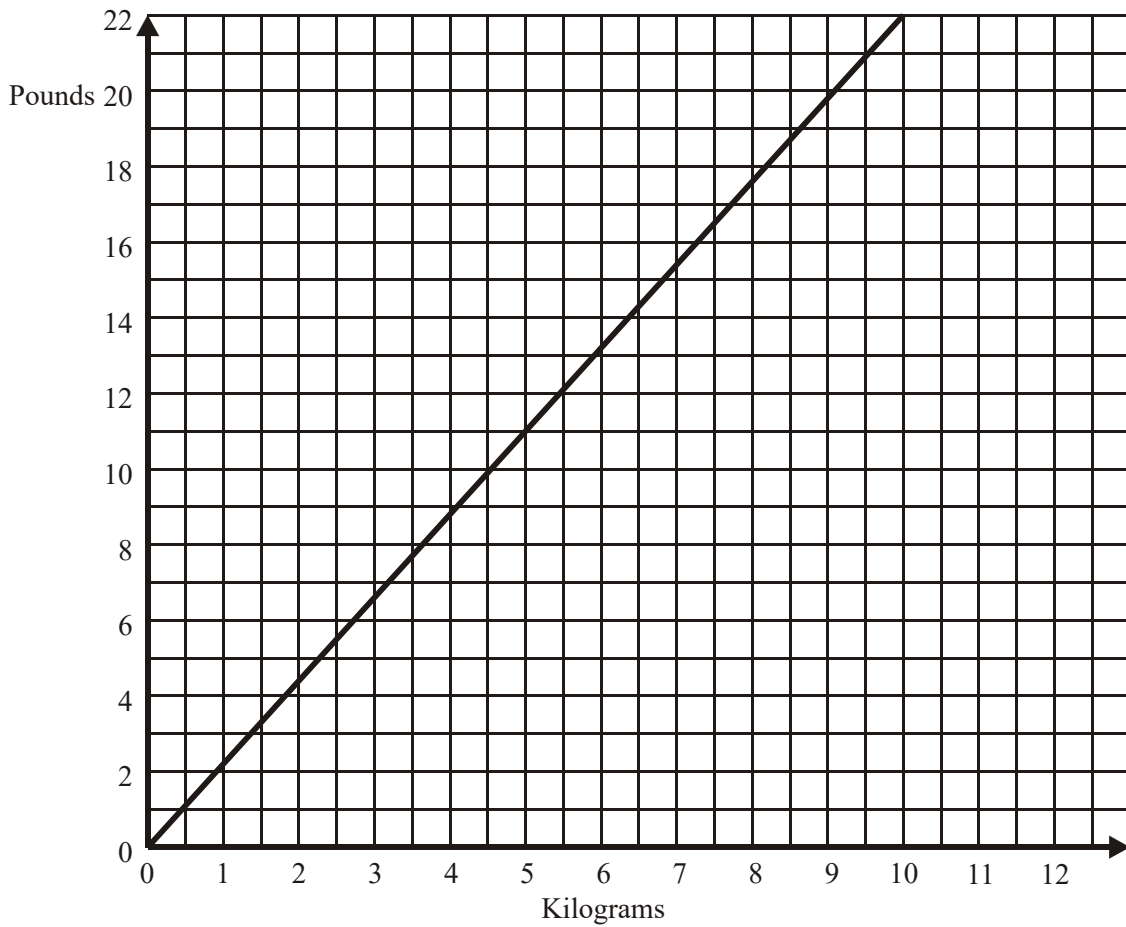
.....cm

(ii) Change 3.8 litres to millilitres.

.....ml

(2)
(Total 4 marks)

22.



The conversion graph above can be used for changing between kilograms and pounds.

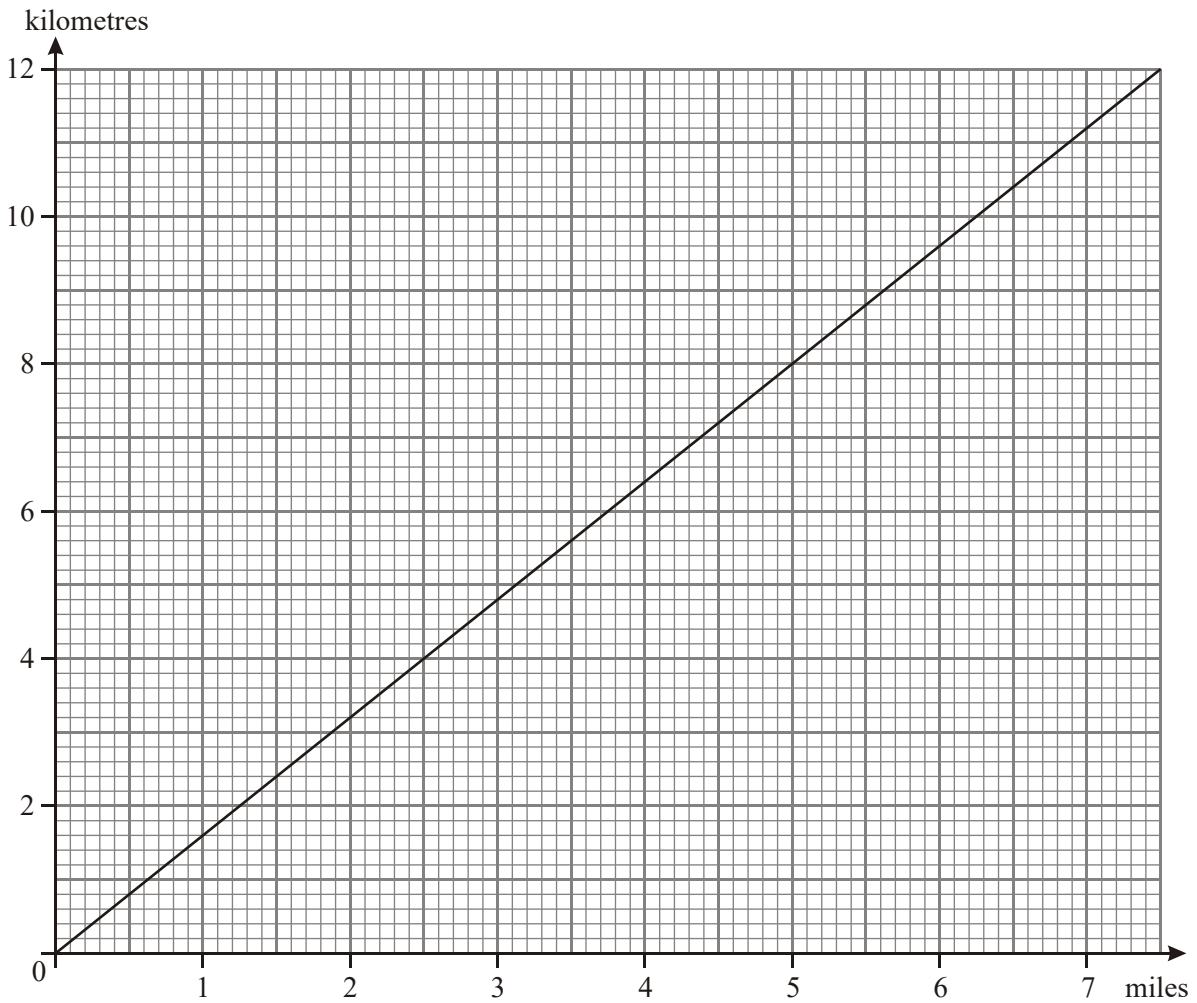
(a) Use the graph to change 22 pounds to kilograms.

..... kg (1)

(b) Use the graph to change 2.5 kilograms to pounds.

..... pounds (1)
(Total 2 marks)

23. The conversion graph can be used for changing between miles and kilometres.



(i) Use the graph to change 3 miles to kilometres.

..... km

(ii) Use the graph to change 11 kilometres to miles.

..... miles

(Total 2 marks)

24. A student bought a pair of sunglasses in the USA.
He paid \$35.50
In England, an identical pair of sunglasses costs £26.99
The exchange rate is £1 = \$1.42

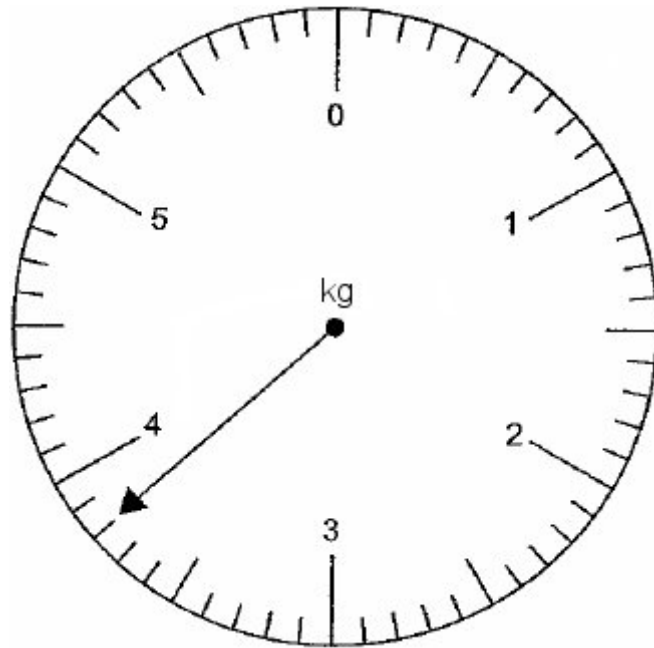
In which country were the sunglasses cheaper, and by how much?
Show all your working.

.....
(Total 3 marks)

25. Change 5 kg to pounds.

..... pounds
(Total 2 marks)

26.



(i) Write down the reading shown on the scale.

..... kg

(ii) Change 5.7 kg to grams.

..... g
(Total 2 marks)

27. Alison travels by car to her meetings.
Alison's company pays her 32p for each mile she travels.

One day Alison writes down the distance readings from her car.

Start of the day: 2430 miles

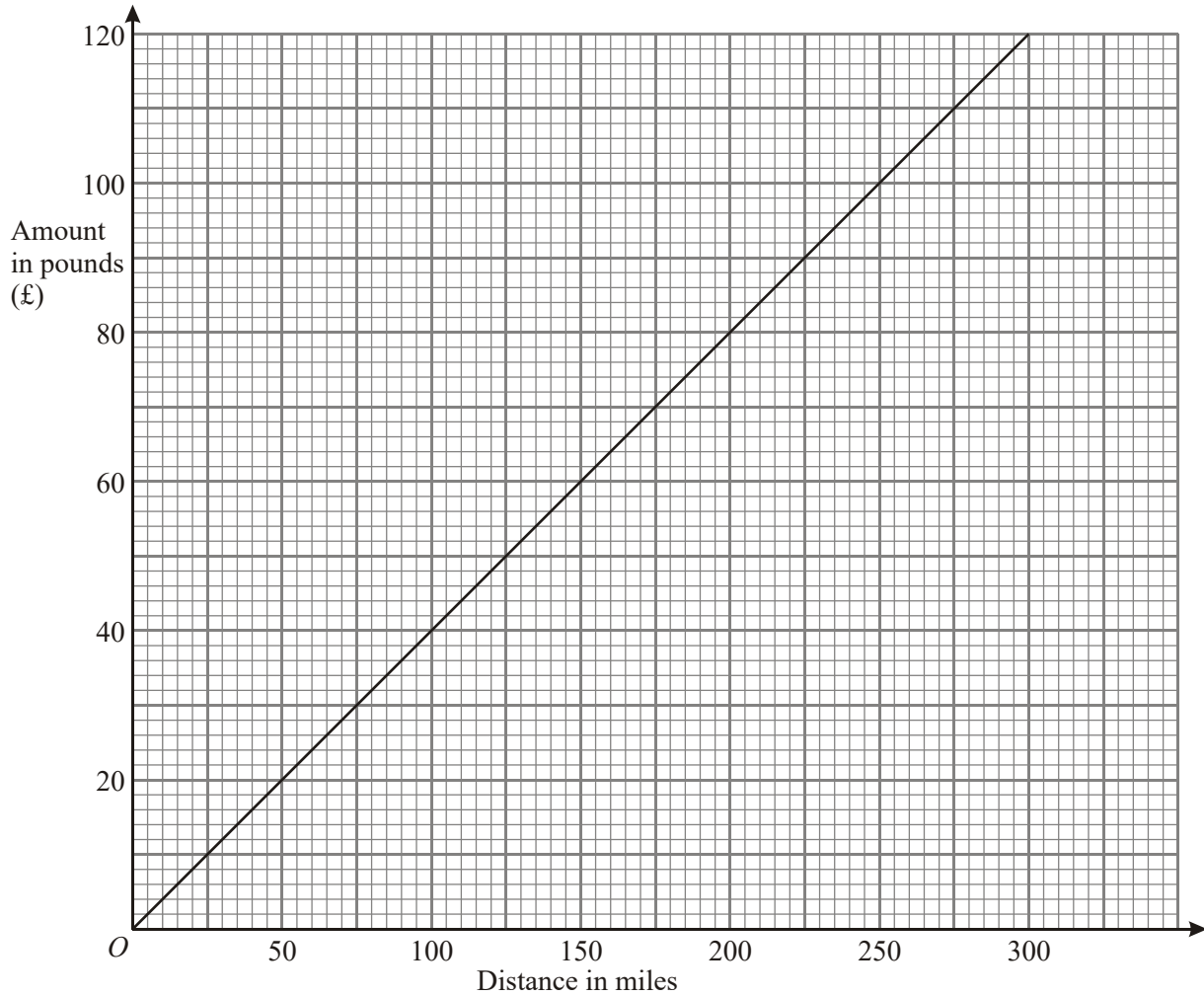
End of the day: 2658 miles

- (a) Work out how much the company pays Alison for her day's travel.

£

(4)

Tom also travels by car to his meetings.
 Tom's company works out the amount it will pay him for the distance he travels.
 It uses the graph below.



(b) Use the graph to write down

(i) the amount Tom's company pays him when he travels 200 miles,

£

(ii) the distance Tom travels when his company pays him £50.

..... miles

(2)

(Total 6 marks)

28. Pete went to South Africa.

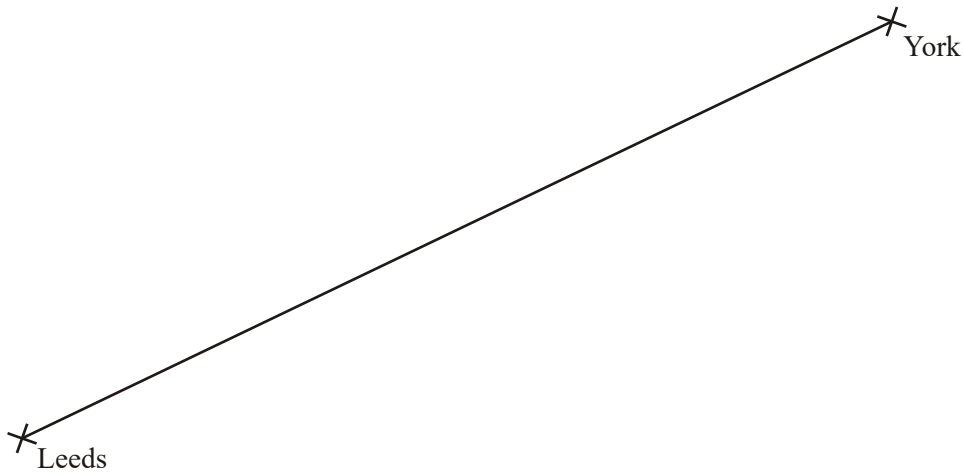
He changed £200 into Rand.

The exchange rate was £1 = 11.38 Rand.

Work out the number of Rand that Pete got.

.....Rand
(Total 2 marks)

29.



Scale: 1 cm represents 3 km

Find the actual distance between Leeds and York.
Give your answer in kilometres.

.....km
(Total 3 marks)

30. (a) (i) Change 5.6 metres to centimetres.

.....cm

(ii) Change 6700 millilitres to litres.

.....litres

(2)

(b) Write down the name of the **metric** unit which is usually used to measure the weight of a person.

(1)

(Total 3 marks)

31. Alfie went to Spain.
He changed £400 into euros.

The exchange rate was £1 = 1.45 euros.

Work out the number of euros that Alfie got.

.....euros

(Total 2 marks)

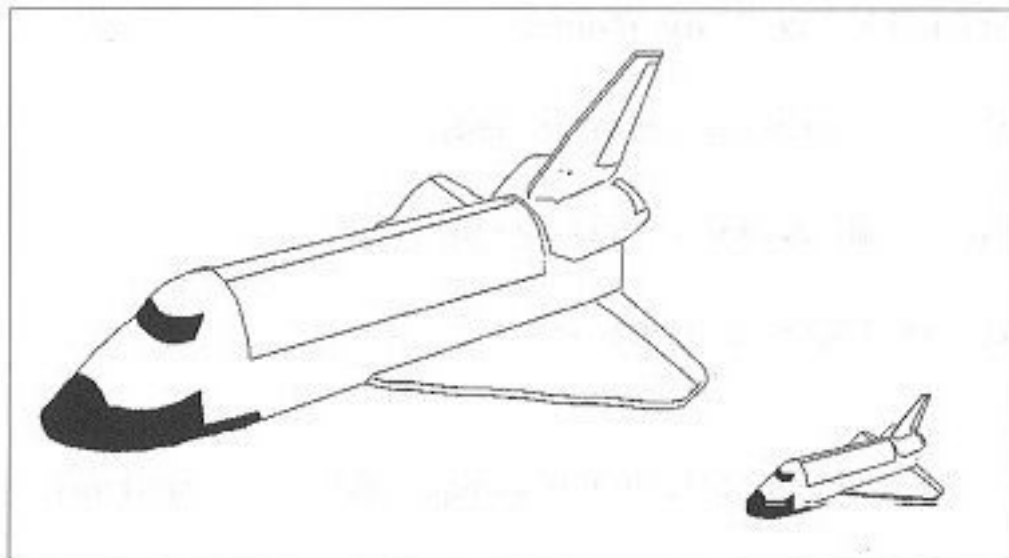
32. Change 22 pounds to kilograms.

.....kilograms

(Total 2 marks)

33.

Picture **NOT** accurately drawn



A model of a space shuttle is made to a scale of 2 centimetres to 1 metre.

The height of the model is 10 centimetres.

Work out the height of the space shuttle.
Give your answer in metres.

.....m
(Total 2 marks)

34. (a) Write down the name of the **metric** unit used to measure

(i) the weight of a man,

.....

(ii) the distance from New York to London.

.....

(2)

(b) Change 4 metres to centimetres.

..... cm (1)

(c) Change 9000 millilitres to litres.

..... litres (1)
(Total 4 marks)

35. (a) Write down the number of pounds in 1 kg.

..... pounds (1)

(b) Change 4 kg into pounds.

..... pounds (1)
(Total 2 marks)

36. (a) Write down the name of a sensible **metric** unit that can be used to measure

(i) the weight of a grape,

.....

(ii) the diameter of a CD.

..... (2)

(b) Change 7 kilometres to metres.

..... m

(1)

(Total 3 marks)

37. (a) Write down a sensible **metric** unit that can be used to measure

(i) the height of a tree,

.....

(ii) the weight of a person.

.....

(2)

(b) Change 2 centimetres to millimetres.

..... millimetres

(1)

(Total 3 marks)

38. Jade measured the length of a line as 54 mm.

What is this length in centimetres?

54 cm

540 cm

5400 cm

5.4 cm

0.54 cm

A

B

C

D

E

(Total 1 mark)

39. What is 1.5 kilograms in grams?

15 grams

150 grams

1.500 grams

1500 grams

1050 grams

A

B

C

D

E

(Total 1 mark)

1. (a) $\frac{1}{4}$ oe

1

BI cao

- (b) 0.75

1

BI cao

- (c) 75%

1

BI cao

- (d) (i) 9

2

BI accept answer in range 9 – 9.2

- (ii) 15 - 16

BI accept answers in range 15 – 16

[5]

2. (a) 10

1

BI cao

- (b) 5.5

1

BI ± 0.3 pounds

(c) 50 3
 $\frac{110}{22}$

M1 for use of graph at 11 or $\frac{110}{22}$

A1 for 5

A1 cao

SC B2 for 49.5 – 50.6

[5]

3. 44.8 2
 $28 \div 5 \times 8$ $28 \div 0.625$ 28×1.6

M1 for attempt to find $\frac{8}{5}$ of 28

A1 cao

[2]

4. (a) 10 1
B1 cao accept 8 – 12

(b) 14 1
B1 cao accept 12 – 16

[2]

5. £1.87 or £1.88 5
 $108 \div 1.44 = \text{£}75$
 $117 \div 1.6 = \text{£}73.125$
 £1.87 is cheaper in Germany.

M1 for $108 \div 1.44$

A1 for £75

M1 for $117 \div 1.6$

A1 for £73.13 or £73.12 or 73.125

B1 (dep on at least one M1) ft for correct difference

[5]

6. Either $35.50 \div 1.42 = 25$; $26.99 - 25 = 1.99$
Cheaper in the USA
Or
 $26.99 \times 1.42 = 38.33$; $38.33 - 35.50 = 2.83$
Cheaper in the USA 3
- M1* $35.50 \div 1.42$
A1 25 seen
B1 ft (dep on M1) £1.99 with conclusion (must have units)
- OR**
M1 26.99×1.42
A1 38.32 or 38.33... seen
B1 ft (dep on M1) \$2.83 or \$2.82 with conclusion (must have units) must be to 2dp
- [3]**
-
7. (a) 745.75 2
475 × 1.57
M1 for 475×1.57
A1 cao
- (b) 104 2
650 × 0.16
M1 for $650 \times \frac{16}{100}$
A1 cao
- [4]**
-
8. (a) grams, g 3
centimetres, cm
millilitres, ml, cm³
B1 oe spelling
B1 oe spelling
B1 oe spelling
- (b) 5 1
B1 cao
- [4]**
-
9. (a) 2.40 1
B1 cao could be indicated on the diagram

(b) 2.00 2

$$1.60 + 0.40$$

*MI for appropriate sum or product in £ or p or 200 seen
eg 1.60 + 0.40, 160 + 40, 0.80 + 0.80 + 0.40,
80 + 80 + 40, 0.08 × 25, 0.80 × 2.5, 200
AI cao*

(c) 1.25 2

$$1 \div 0.8 \text{ or } 2.50 \div 2$$

*MI for 1.00 ÷ 0.8 or 2.50 ÷ 2 or 125 or appropriate
combination eg 1 + $\frac{1}{2} \times 0.50$
AI cao*

[5]

10. (a) 72.96 4

$$2658 - 2430 = 228$$

$$\text{"228"} \times 32$$

*MI 2658 - 2430
AI 228
MI "228" × 32 or "228" × 0.32 or digits 7296 seen
AI cao
Or
MI for 2430 × 32 (or digits 77760 seen)
or 2658 × 32 (or digits 85056 seen)
AI if 1 correct
MI for "85056" - "77760" or 7296 seen
AI cao*

(b) 87 3

$$\frac{2}{5} \times 145 = 58$$

$$145 - \text{"58"}$$

$$\text{MI } \frac{2}{5} \times 145 \text{ (or MI } \frac{3}{5} \text{ seen)}$$

$$\text{AI 58 (or MI } \frac{3}{5} \times 145)$$

AI for 87 ft

- (c) (i) 80 2
B1 for 80 (± 1)
- (ii) 125
B1 125 (± 3)
- [9]**
11. 945 2
 2.10×450
M1 for digits 210×450 or sight of digits 945
A1 cao
- [2]**
12. (a) 945 2
 2.10×450
M1 for digits 210×450 or sight of digits 945
A1 cao
- (b) 30 2
 $63 \div 2.10$
M1 for $63 \div$ digits 210
A1 cao
- [4]**
13. $100 \div 2.10 (= 47.62)$
 $70 \div 1.40 (= 50)$
 $50 - 47.62$
 2.38 4
- M1 for $100 \div 2.10$ or 47.62 or 47.61(...) or 47.6(0) seen*
M1 for $70 \div 1.4$ or 50 seen
M1 (dep on at least 1 previous M1) for "50" – "47.62"
A1 for 2.38 or 2.39
- [4]**
14. (a) Centimetres (cm)
 miles
 litres (l) 3
- B3 (B1 for each correct answer) accept abbreviations*

	(b)	300		1	
			<i>B1 cao</i>		
	(c)	'1500 > 1400' or '1.5 > 1.4'		1	
		= Reason			
			<i>B1 for No and '1500 > 1400' or '1.5 > 1.4'</i>		[5]
15.	(a)	89 – 91		1	
			<i>B1 89 – 91</i>		
	(b)	110		1	
			<i>B1 109 – 111 or ft on 200 – (a)</i>		
	(c)	(i)	4.0 – 5.0	2	
			<i>B1 4 – 5</i>		
			<i>B1 40 – 50 or ft 200 ÷ (c)(i)</i>		
		(ii)	40 – 50		[4]
16.	(a)	metres (m) grams (g) litres (l)		3	
			<i>B3 all correct, accept abbreviations (B1 for each one correct)</i>		
	(b)	4×100 400		1	
			<i>B1 for 400 cao</i>		
	(c)	$1500 \div 1000$ 1.5		1	
			<i>B1 for 1.5 cao</i>		[5]
17.	(a)	1.5-2.0		1	
			<i>B1 for height 1.5-2.0 inclusive</i>		
	(b)	Height $\times 4$ 6-8		2	
			<i>M1 for $\times 4$ or "height" $\times 4$ A1 6-8 inclusive OR ft (a) $\times 4$</i>		[3]

18. (a) (i) Kilometres
Bl (accept km)
- (ii) Litres
Bl for litres, (accept kilolitres, m^3 or appropriate abbreviations) 2
- (b) (i) 50
Bl cao
- (ii) 4
Bl cao 2
- [4]**
19. (a) 4.6
Bl cao 1
- (b) (i) $2 \rightarrow 2.4$
Bl for $2 \rightarrow 2.4$
- (ii) $10 \rightarrow 12$
Bl for $10 \rightarrow 12$ or $5 \times$ '(i)' ft 2
- [3]**
20. (a) 492
 300×1.64
M1 for 300×1.64 OR digits 492
A1 2
- (b) 79.33...
 $119 \div 1.5$
M1 for $119 \div 1.5$ OR digits 79...
A1 for 79.33 or better 2
- [4]**

21. (a) (i) Kilometres
BI 2
- (ii) Grams
BI
- (b) (i) 24
BI accept 24.0 2
- (ii) 3800
BI
- [4]**
-
22. (a) 10
BI cao 1
- (b) 5.5
BI ± 0.3 1
- [2]**
-
23. (i) 4.8 ± 0.1
BI for 4.8 ± 0.1 2
- (ii) 6.9 ± 0.05
BI for 6.9 ± 0.05
- [2]**
-
24. Either
 $35.50 \div 1.42 = 25$; $26.99 - 25 = \text{£}1.99$
 Cheaper in the USA
 Or
 $26.99 \times 1.42 = 38.33$;
 $38.33 - 35.50 = \text{\$}2.83$
 Cheaper in the USA 3
- M1 $35.50 \div 1.42$
 A1 25 seen
 B1ft (dep on M1) for $\text{£}1.99$ with conclusion; units needed
 OR:
 M1 26.99×1.42
 A1 38.33 or 38.32... seen
 B1 ft (dep on M1) for $\text{\$}2.83$ or $\text{\$}2.82$ with conclusion; units needed*
- [3]**

25. 11 2
 5×2.2
MI for $5 \times 2.2 \pm 0.2$
AI for 11 ± 1 [2]
26. (i) 3.8 2
BI
- (ii) 5700
BI [2]
27. (a) 72.96 4
 $2658 - 2430 = 228$
 $"228" \times 32$
MI 2658 – 2430
AI 228
MI "228" \times 32 or "228" \times 0.32 or digits 7296 seen
AI cao
Or
MI for 2430×32 (or digits 77760 seen)
or 2658×32 (or digits 85056 seen)
AI if 1 correct
MI for "85056" – "77760" or 7296 seen
AI cao
- (b) (i) 80 2
BI for 80 (± 1)
- (ii) 125
BI for 125 (± 3) [6]
28. 200×11.38 2
 2276
MI for 200×1138 (or $\times 11.38$) or digits 2276(00) seen
AI [2]

29. 12×3
 36 ± 0.6 3
- BI for 12 ± 0.2*
MI for " 12 " $\times 3$
AI for 36 ± 0.6
- [3]**
-
30. (a) (i) 560 2
BI
- (ii) 6.7
BI
- (b) kg 1
BI
- [3]**
-
31. 1.45×400
580 2
- MI for 1.45×400 or digits 58(000)*
AI cao
- [2]**
-
32. 9 to 11 2
- MI for $22 \div (2.2 \pm 0.2)$*
AI
- [2]**
-
33. $10 \div 2$
5 2
- MI for $10 \div 2$, or multiplication of a scale factor like 1 : "50"*
AI cao
- [2]**
-
34. (a) (i) Kilograms 2
BI for kg, kilograms
- (ii) Kilometres
BI for km, kilometres

	(b)	400	<i>Bl accept 4 hundred</i>	1	
	(c)	9	<i>Bl accept nine</i>	1	
					[4]
35.	(a)	2.2	<i>Bl for 2.2 or better (2.20462...)</i>	1	
	(b)	"2.2" \times 4 = 8.8	<i>Bl ft from their (a) \times 4 or accept answers in range $8 \leq w < 9$</i>	1	
					[2]
36.	(a)	(i)	grams <i>Bl for g, grams</i>	2	
		(ii)	centimetres or millimetres <i>Bl for cm, centimetres, mm or millimetres</i>		
	(b)	7000	<i>Bl cao</i>	1	
					[3]
37.	(a)	(i)	metre <i>Bl for metre or m</i>	2	
		(ii)	kilogram <i>Bl for kilogram or kg or Newton or N</i>		
	(b)	2×10 20	<i>Bl for 20 cao</i>	1	
					[3]

38. D

[1]

39. D

[1]

1. Candidates had variable success with this question.
Part (a) was mostly well understood by all candidates.
Part (b) proved difficult for a lot of candidates with 3.4 or 0.34 often seen as incorrect answers.
Part (c) was usually correct in about 75% of cases whilst
Part (d) was completed fairly well by 90% of candidates.
2. In part (a) almost all candidates gave the correct answer.
In part (b) less than half the candidates wrote down an answer within the acceptable tolerance of 5.5 ± 0.3 pounds. Many either misread the graph or, more probably, did not use the graph but applied the 'rough' conversion factor of 1°kg to 2 pounds to obtain the answer '5'.
In part (c) more candidates gave the unacceptable answer of 55 kg rather than the 50 kg (or thereabouts) gained by accurate use of the graph or by using the conversion factor $1 \text{ kg} \approx 2.2$ pounds. Centres are reminded that this fact is stated in the specification as one which candidates are expected to know.
3. Most candidates failed to recall the conversion factor required, and in this case usually did 28×100 or 10 or 1000. Conversion factors of 1.8 and 1.5 were used incorrectly in some calculations, and there were some candidates who merely guessed the relationship between miles and kilometres.
4. Generally a well answered question. The main weakness was in part (b), where some candidates read the scale incorrectly, or gave a negative answer.
5. This question was extremely well done, with the majority of candidates scoring full marks. A minority of candidates spoilt their final answer by not rounding it to two decimal places (money notation).

6. Paper 2

This question was demanding. Responses ranged from no attempt to completely correct answers with working clearly shown. In between these two extremes, some candidates ignored the units completely, calculating $35.50 - 26.99$, while others made the wrong decision as to whether multiplication or division by 1.42 was necessary. Occasionally, having performed an appropriate calculation, candidates lost a mark by failing to state explicitly how much cheaper the sunglasses were in the USA.

Paper 4

It was very encouraging to find most candidates approaching a relatively unstructured question in the correct manner. The choice of operations for currency conversion was usually correct, and most candidates then went on to perform the subtraction and make the necessary comparison. The only significant errors included premature rounding and a failure to include units in their conclusion. Overall a question in which candidates fully read and answered the question.

7. This was a well answered question. Nearly $\frac{3}{4}$ of all candidates knew how to convert the £ 475 into Euros, the most common error being an attempt to divide rather than multiply. A greater proportion of the candidates gained full marks, giving the correct answer. The only common confusion was by those candidates who felt the need to divide by the 16, rather than multiply. It was disappointing to see a significant minority trying to use a partitioning method to break the percentage down into 10%, 5%, and 1%, but all such methods led to inaccuracy and error.
8. Candidates varied widely in their familiarity with metric units and imperial units appeared regularly. Full marks for part (a) were not uncommon but nor was “metres” as the answer to the second part. In part (b), converting metres to kilometres was beyond many candidates, incorrect answers generally ranging from 50 to 50 000.
9. In part (a), the majority of candidates scored the mark for reading £2.40 directly from the table, although a few wrote £240. Part (b) was also well answered, usually with little or no working. 200 appeared occasionally, gaining one mark. A common wrong answer was 2.10 ($1.60 + 0.50$, instead of $1.60 + 0.40$). Part (c) proved much more demanding and, although it was more likely that working would be shown for this part, it was often difficult to follow. The most popular wrong answer was €1.20, arising from $80p = €1$, to which 0.20 was then added.

10. (a) About 34% candidates were able to find the number of miles travelled during the day and go on to calculate expenses paid, though a significant proportion added rather than subtracted the distance readings. To candidates' credit, some working was often shown and so part marks could be awarded if the final answer was incorrect. Only 36% of candidates scored no marks.
- (b) This part of the question was answered less successfully than the previous part, with some candidates making no attempt. Only 15% gained all three marks and a further 10% gaining one or two marks. A significant proportion of the answers seen were 58 indicating that the candidate may not have read the question carefully enough. Those candidates gaining full marks usually calculated $\frac{2}{5}$ of the distance and subtracted their answer from 145 rather than using the fraction $\frac{3}{5}$.
- (c) This part was well understood with 96% obtaining the correct answer to (i) and 74% reading the graph in reverse.
11. This question was understood by candidates at this tier with 52% gaining full marks. A significant proportion of candidates divided by 2.10 rather than multiplied. Sight of the digits 945 gained partial credit if candidates had wrongly placed their decimal point to give answers such as 9.45 or 94500; this mark was obtained by another 6% of candidates.

12. Specification A

It was pleasing that the majority of candidates gained full marks for both parts of this question. When errors were made these were often due to confusion over whether to multiply or divide. A few candidates chose the same operation in both parts.

Specification B

Very many candidates succeeded in scoring full marks in both parts (a) and (b). The most common error was to divide 450 by 2.10 in part (a) and multiply 63 by 2.10 in part (b) or simply to carry out the same operation in both parts.

13. Almost 50% of candidates gained at least three of the four marks. Unfortunately many candidates lost the accuracy mark because they rounded their answer to $100 \div 2.10$ to £47.60 or even, in some cases, to £48. Many realised that it was necessary to divide the Francs and Euros by the exchange rates but some calculated 100×1.40 , instead of $70 \div 1.40$, after correctly calculating $100 \div 2.10$. The most common incorrect method was to multiply by the exchange rates.

14. Candidates find these questions very difficult. Part (a) was only rarely completely correct with candidates frequently mistaking metric and imperial units. In part (b), candidates were a lot more successful with changing 3 m into 300 cm though 30 and 3000 were often seen. In part (c) there was a lot of confusion here, often based around the use of the abbreviation 'm'. Many candidates interpreted this as miles. Many candidates actually stated which was the largest quantity but failed to give a valid reason by not converting the Km to m or vice versa. A few candidates who did actually have the correct conversions then stated the wrong result.
15. About four fifths of candidates could correctly identify "90" as the reading on the scale and also work out the number of litres added. Most of the incorrect responses seen in part (a) were "85". In part (c) under 1% of candidates were able to state the number of litres in a gallon, but to their credit many candidates gained a follow through mark for using their answer to (c)(i) correctly in part (c)(ii).
16. More than three quarters of the candidates gained at least two marks in part (a) and few failed to give at least one correct metric unit. The most common incorrect answers were 'feet' for the height of the tree, 'kg' for the weight of an egg and 'gallons' for the amount of petrol. In part (b) almost 70% of candidates were able to change 4 metres to centimetres but only half that number could change 1500 grams to kilograms in part (c) where 15 and 150 were the most common incorrect answers.
17. This was a good discriminator. Candidates were expected to make a reasonable estimate of the normal height of a man in metres; a wide tolerance of 1.5 to 2.0 metres was accepted. The flagpole was exactly 4 times as high as the man in the diagram.
- In part (a) it was disappointing to find totally unreasonable estimates being given, some quite absurd heights. In part (b) candidates were not careful enough to measure the scaling factor, and a significant number used 3 or 5 as the scale. Those who gave an incorrect estimate in part (a) but used this in part (b) were given some credit.
18. Though most candidates could identify a unit of length or volume in part (a) of this question, imperial units were often seen. Most candidates gained at least one mark in each of parts (a) and (b). Only 40% of candidates could carry out successfully both the conversions in part (b), with a further 40% getting one correct, usually (b)(i).

19. There was a 68% success rate in part (a) with 4.3 being a very common incorrect answer. In part (b) it was clear that very few candidates knew that there were 2.2 lbs (or even 2 lbs) in a kg. The most popular response was '10' although '100' and '1000' were also commonly seen. This resulted in babies weighing 50, 500 or even 5000 lbs ... quite an accomplishment even in this age of obesity! Hardly any candidates scored both marks and around 70% scored 1 mark, generally for multiplying their answer to (b)(i) by 5.
20. Candidates were more successful in part (a) than part (b) although some attempted to divide in (a). Many candidates multiplied in (b) scoring no marks.
21. (a) This was rarely left blank with the most popular incorrect responses being *miles* and *kg*. Many responded with the instrument you would use to measure eg: *scales* for the weight. (b)(i) was frequently correct. (b)(ii) digits 38 with random decimal point or zeros was common but rarely correct.
22. The conversion graph was usually correctly used to obtain the kg in part (a). Part (b) was split between those within the tolerance and those around 4.5.
23. Surprisingly, reading values from the graph was generally not well handled. Changing 3 miles to kilometres involved an interpretation of the scale on the vertical axis and this was the downfall of many candidates with a significant number of candidates incorrectly writing 4.4 rather than 4.8. Part (ii) was more successful (52% correct), but inaccuracy in reading off the scale was much in evidence.

24. Paper 15

Most candidates attempted this question with varying degrees of success. Many did not appreciate that they had to provide the difference in cost as well as the country. But the main problem here was a lack of clear working which made it difficult to award part marks. The most common incorrect response was U.S.A. with 8.51, obtained by subtracting 26.99 from 35.50. Here candidates did not understand that the question required a conversion from one currency to the other, either multiplying or dividing by 1.42. The favoured method was to convert dollars to pounds but confusion arose as to whether to multiply or divide 35.50 by 1.42. Others rounded £26.99 to £27 which hindered accuracy. A few candidates lost out on the final accuracy mark because they did not put £ or \$ with their difference.

Paper 17

This question was answered well with the majority of candidates earning at least 2 marks. Failure to work out the difference in price or the omission of units accounted for the loss of the third mark on many occasions. A number of candidates rounded £26.99 to £27 and lost many marks.

25. Most candidates had little idea as to how to correctly convert kg to pounds. Most candidates gave the answer of either 50, 500, 5000 or $2\frac{1}{2}$ with some even responding with an answer of 5.
26. Over 85% of the candidates were able to deduce that the reading on the scale was 3.8 kg. Ignoring the decimal point was the most common error giving a reading of 38. The second part requiring the change from kg to grams was less successful with only 9% of the candidates writing 5700. Many realised that the final outcome needed the inclusion of zeros and answered 507, 5.700, 5000.7, etc.
27. In spite of the fact that this is a calculator paper there were considerable efforts made to avoid its use in this question. Copious calculations were seen, some of which were successful. The main stages of finding the difference in the mileage and multiplying this by the cost per mile provided a fairly straightforward way of dealing with the problem. Some candidates, however, were unable to deal confidently in handling 32p or £0.32 when it came to the multiplication by 228. Alternative methods abounded and 2430×32 then 2658×32 sometimes gave the right result where the handling of the larger numbers could be dealt with. Many candidates added the two given mileages and consequently gave an exceptionally high payment for travel expenses not thinking about “sensible” answers. Over 60% of the candidates scored 2 or more marks with a pleasing 31% scoring all 4 available marks. Reading the values off the graph in part (b) didn’t present too much difficulty although the scale was sometimes misinterpreted.

28. The conversion of 'pounds' to 'rands' involved multiplying '200' by '11.38' and there were a significant number of correct conversions (around 50%) which, in the absence of any working, was correctly performed on the calculator. Some, however, evaluated '200 divided by 11.38'. It may have helped if an estimation had been made at the beginning or even an appreciation that the required outcome produced a 'bigger' number; the thought that '£2 = 22.76 rand' might have indicated the direction in which they were going.
29. This question was very well done with most candidates gaining maximum marks. Common errors were to ignore the given scale, giving an answer of 12 or inaccurate measurement but multiplying by 3, in each case scoring one mark only. Some measured the line with their scale starting at 1 cm, resulting in a length of 13 cm and an answer of 39 km.
30. Only just over a quarter of the candidates were able to score marks in this question. Changing '5.6' metres to centimetres lead only to combinations of values with the digits '5', '0' and '6' in no particular order. The conversion from '6700' millilitres to litres fared little better except that there was a realisation that the end value would be less. In part (b) the metric unit for weight appeared to cause much difficulty. The words 'stones' or 'pounds' were often incorrectly given. It also seemed to some that the question was asking how weight is measured with the word 'scales' being a fairly common incorrect response.
31. Nearly 65% of the candidates realised that you had to multiply by 400 and 1.45 with most of those then going on to provide the correct answer of £580. A few could not cope accurately with the decimal point. Most of those who did not realise they had to multiply went on to divide with 275, or thereabouts, being a common incorrect response.
32. There was little evidence of a method being used to convert pounds to kilograms. The value 2.2 often appeared as the final result but whether it was presented as a conversion factor or merely inserting a decimal point in the 22 or dividing 22 by 10 it is hard to know. The pounds / kilogram questions have been a familiar sight on past papers thus there might have been a greater level of success expected. As it was, only just over 10% of the candidates were able to provide an answer of between 9 and 11 inclusive.
33. This was generally well done, most candidates giving a correct answer of 5 metres. A common error was to multiply 10 by 2. Few candidates actually used the scale factor of 50, but of those that did, 500 was a common response with no attempt to change the units.

34. This question was not well understood with on average only about 40% of candidates being able to give the correct metric unit for weight or distance in part (a). Candidates were more successful in part (b) with 60% of candidates being able to change metres to centimetres whilst only 40% of candidates could change millilitres into litres.
35. Candidates struggle to cope with Imperial-Metric conversions and this year was no exception. Virtually none of the candidates were able to convert 1 kg to pounds accurately. However, most (82%) were able to pick up a mark in part (b) by multiplying their answer to (a) by 4. The most common sets of answers were 1000, 4000 and 100, 400.
36. Ounces, pounds and kilograms were the most common errors in (ai) whilst inches and metres were sometimes seen in the more successfully answered (a ii). In part (b) 700 and 70 were the most often seen mistakes
37. This question was not well understood and very few candidates obtained full marks. The most successful part was part (c) with almost all candidates giving 20mm. Very few candidates were able to give metric measures for height and weight though the majority of candidates gained 1 mark for either metres or kilograms.
38. No Report available for this question.
39. No Report available for this question.