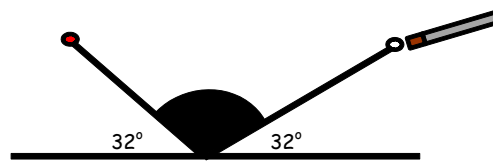


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1. Given the ball hits the side of the snooker table.  
The shaded angle will be:



$$\text{Angle} = 180^\circ - 32^\circ - 32^\circ = 116^\circ$$

2. Given the colour, style and Engine type of cars.  
Another 5 possible combinations are: ( All other combinations shown)

Colour	Style	Engine Type
Black	Hatchback	Diesel
Black	Hatchback	Petrol
Black	Saloon	Diesel
Black	Saloon	Petrol
Red	Hatchback	Diesel
Red	Hatchback	Petrol
Red	Saloon	Diesel
Red	Saloon	Petrol

3. Given the final scores in the Master's Golf.  
The player who won is:  
(The lowest number) Ben Logan

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4. Given the train timetable for the three trains.
- (a) If Amanda takes the 09 52 train from Lanark to Glasgow then she will arrive in Glasgow at:

09 52 means she takes train 1 which arrives in Glasgow at 10 55.

- (b) Given Lewis boards a later train at Wishaw and arrives in Glasgow at 11 55.

The train journey took:

Since train arrived at 11 55 in Glasgow he took train 3.

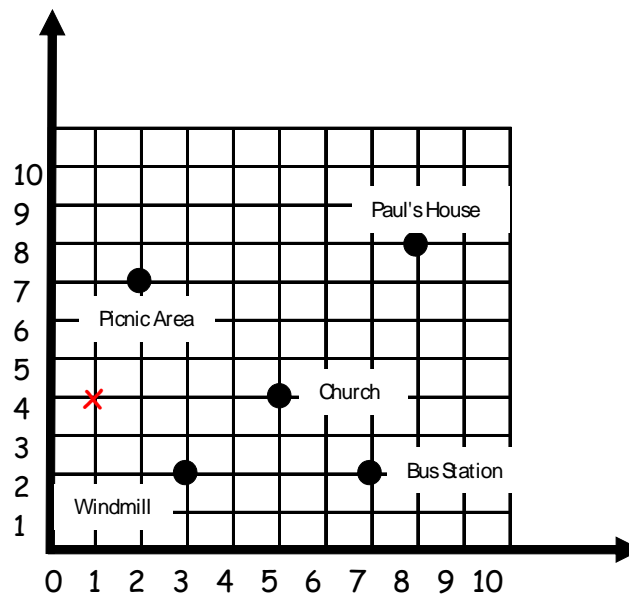
It left Wishaw at 11 08.

So time taken is  $11\ 55 - 11\ 08 = 47$  mins.

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5. Given the plan of some landmarks near Paul's house.

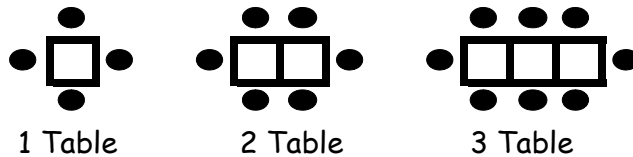


- At position (2,7) is the picnic area.
- Windmill has coordinates (3,2)
- The position of Paul's aunt farm is marked in red on grid.
- If Paul walks from his house to church his direction is South West.

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6. Given the pattern of chair and seats in the restaurant.



(a) Completing the table we get:

Number of tables (T)	1	2	3	4	5	6		13
Number of chairs (C)	4	6	8	10	12	14		28

(b) Steps for working out the rule:

1. Difference is 2
2. Part of rule is 2T
3. Correction factor, so that the rule works is, add on 2

2 × 3 + 2 = 8

Full rule is:  $C = 2T + 2$  = Check !!!!

7. Rachel's payslip is completed in red.

Name of Employee : Rachel Brown					
Payment	Basic Pay	Overtime	Bonus		Gross Pay
	£180.00	£28.00	£20.00		£228.00
Deductions	National Ins.	Income Tax	Union		Total Deductions
	£14.50	£36.00	£2.00		£52.50
					Net Pay
					£175.50

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8. Given the table of Sales and Bonus for the double glazing firm.

(a) From the table, since John sold £5000 of double glazing his bonus is £0.

(b) Martha sold £16000 of double glazing so her bonus will be:

$$6 \div 100 \times 15000 = \text{£}900 \text{ Bonus}$$

9. Given the line graph and that Scott goes on a diet from 4<sup>th</sup> Feb to 22<sup>nd</sup> Apr.

(a) From the graph Scott's weight at 4<sup>th</sup> Feb is 74kg.

(b) Scott weighed 72.5kg on the 25<sup>th</sup> Feb.

(c) Given he is sponsored £30 for every 1kg lost he will collect:

$$\text{Total weight lost} = 74 - 69 = 5\text{kgs}$$

$$\text{Total Cash} = 5 \times \text{£}30 = \text{£}150 \text{ for charity.}$$

10. Given the table of French test results the mode:

Most frequently occurring mark is 16.

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11. Given the table of costs for the Leisure Centre.

- (a) From the table Ian would pay £4.30 for a ticket for the gym.
- (b) Given that Janet buys a special monthly ticket for £25 and she goes to the aerobics 10 times in that month. She will make a saving of:

$$\text{Normal price } \pounds 3.25 \times 10 = \pounds 32.50$$

$$\text{Saving } \pounds 32.50 - \pounds 25.00 = \pounds 7.50$$

12. Given the rectangular table top and the dimensions.

- (a) The area of the table top is:

$$\text{Area} = \text{Length} \times \text{Breadth} = 126 \times 50 = 6300\text{cm}^2$$

- (b) Given the strips to be fitted to the top are 50cm by 10.5 cm.  
The number of strips needed to cover the table top is:

$$126 \div 10.5 = 12 \text{ strips}$$

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13. Given the formula:

$$\text{Expected Height} = 5 \times \text{Age in years} + 80$$

The age of a child whose expected height is 100 cm is:

$$100 = 5 \times \text{Age} + 80$$

$$20 = 5 \times \text{Age}$$

$$\text{Age} = 20 \div 5$$

$$\text{Age} = 4 \text{ years old}$$

14. Given the diagram of the thermometer and the scale.

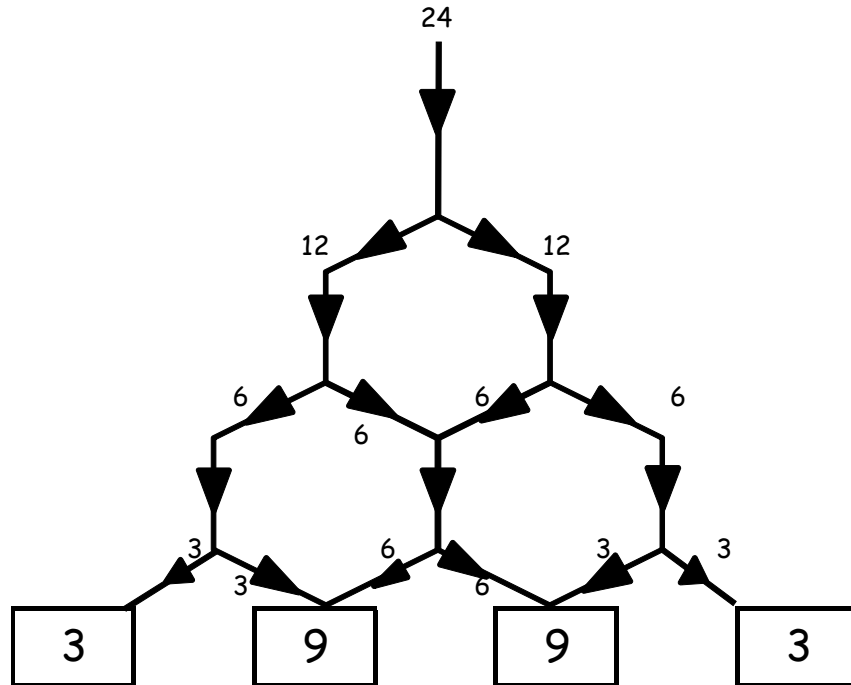
The reading on the thermometer is  $72^{\circ}\text{F}$  ( each division is worth  $4^{\circ}\text{F}$ )

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15. Given the diagram for 12 sheep and the paths that they take.  
(Note at each stage half the sheep go one way and half go the other way)

For 24 sheep the diagram would be:



16. Given the dimensions of the cuboid footstool.
- (a) The volume will be:  $\text{Volume} = L \times B \times H = 40 \times 30 \times 35 = 4200\text{cm}^3$
- (b) The total length of decorative cord to go round the edge of the cuboid.

$$\text{Total Length} = 4 \times 40 + 4 \times 30 + 4 \times 35 = 420\text{cm}$$