**11** Sophia spends a total of £6.30 on cheese.

She buys 500 g of Cheddar cheese and 200 g of Stilton cheese.

The cost of the Cheddar cheese is £9.20 for 1 kg.

Work out the cost of 1 kg of the Stilton cheese.

£...................................................

**(Total for Question 11 is 4 marks)**

**12** The diagram below shows the trapezium *PQRS*



P ⌐         S

(3x – 24)°

Diagram **NOT** accurately drawn

(102 – x)°

Q        R
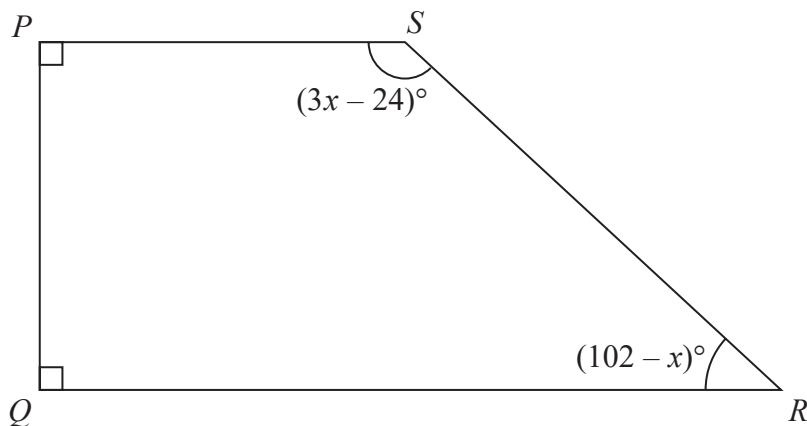
Angle *PQR* and angle *QPS* are right angles.

Find the value of *x*

*x* = .......................................................

**(Total for Question 12 is 3 marks)**

**13** Salma asked some people what type of exercise they each liked the best from walking or running or swimming or cycling.

Salma is going to draw a pie chart for her results.

The incomplete table gives some information about her results.

| Type of exercise | Number of people | Angle in pie chart |
|---|---|---|
| Walking | 18 | 90° |
| Running | | 150° |
| Swimming | | |
| Cycling | 15 | |

18 people answered walking.

(a) How many people answered running?

.............................................

**(2)**

15 people answered cycling.

(b) How many people answered swimming?

.............................................

**(3)**

**(Total for Question 13 is 5 marks)**

**14** Jakub has bought a chicken.

He is going to use this rule to work out the number of minutes it will take to cook his chicken.

> **Cooking time (minutes)**
>
> Multiply the chicken's weight, in kg, by 40
> **Then add**
> 30

The weight of Jakub's chicken is 2.6 kg

(a) Use the rule to work out the number of minutes it will take to cook Jakub's chicken.

.................................................... minutes

**(2)**

The following week Jakub buys another chicken.

He uses the rule and works out that it will take 2 hours 40 minutes to cook this chicken.

(b) Work out the weight of this chicken.

........................................................ kg

**(3)**

**(Total for Question 14 is 5 marks)**

15 Bella and Millie share some money in the ratio 5:2

Bella receives 10.50 euros more than Millie.

Work out the total amount of money they share.

....................................................... euros

**(Total for Question 15 is 3 marks)**

16 Work out the value of

$$\frac{15.2 \times 4.1}{8 - \sqrt{3.7}}$$

Write down all the figures on your calculator display.

.............................................................................................

**(Total for Question 16 is 2 marks)**

**17** Here is a biased spinner.
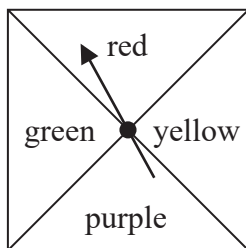


When the spinner is spun once, the probabilities that it lands on red or on yellow or on green are given in the table.

| Colour | red | yellow | purple | green |
|---|---|---|---|---|
| **Probability** | 0.25 | 0.2 | | 0.2 |

(a) Work out the probability that the spinner lands on red or on yellow.

.......................................................

(1)

Yang is going to spin the spinner 300 times.

(b) Work out an estimate for the number of times the spinner will land on purple.

.......................................................

(3)

**(Total for Question 17 is 4 marks)**

**18** In a warehouse there are two types of shelves, type **R** and type **S**.

These two types of shelves are arranged into shelving units that form a sequence of patterns.
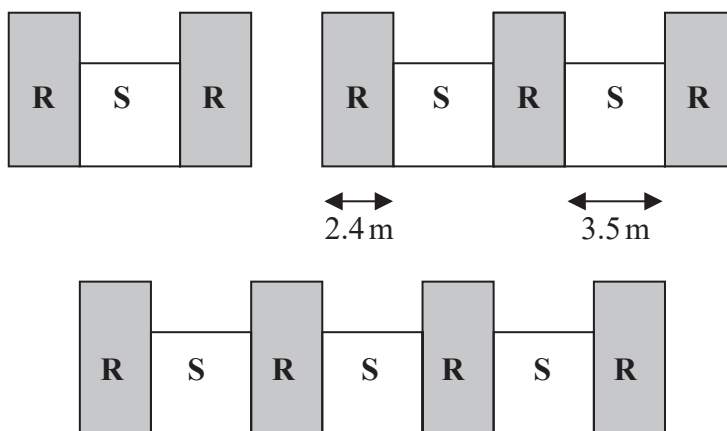
Here are the first three terms in the sequence.



Diagram **NOT** accurately drawn

The width of each type **R** shelf is 2.4 m and the width of each type **S** shelf is 3.5 m

(a) Work out the total width of a shelving unit that has 6 type **R** shelves.

.......................................................... m

**(2)**

A shelving unit has $n$ type **R** shelves.
The total width of this shelving unit is $W$ metres.

(b) Find an expression for $W$ in terms of $n$
   Give your answer in its simplest form.

$W = $ ..........................................................

**(2)**

**(Total for Question 18 is 4 marks)**

**19** Here are five cards.

Each card has a number written on it.

$$\boxed{15} \quad \boxed{7} \quad \boxed{-2} \quad \boxed{23} \quad \boxed{x}$$

The mean of the five numbers is 12

Work out the value of $x$

$x =$ .......................................................

**(Total for Question 19 is 3 marks)**