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Practice Paper A  
Paper 1

Name: \_\_\_\_\_

Class: \_\_\_\_\_

Teacher: \_\_\_\_\_

Date: \_\_\_\_\_

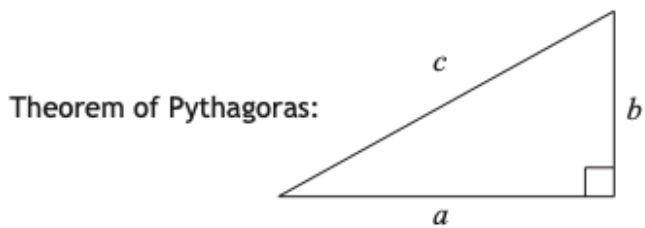
You may **NOT** use a calculator.

Full credit will be given only where the solution contains appropriate working.

## FORMULAE LIST

Circumference of a circle:  $C = \pi d$

Area of a circle:  $A = \pi r^2$



$$a^2 + b^2 = c^2$$

Volume of a cylinder:  $V = \pi r^2 h$

Volume of a prism:  $V = Ah$

Volume of a cone:  $V = \frac{1}{3} \pi r^2 h$

Volume of a sphere:  $V = \frac{4}{3} \pi r^3$

Standard deviation:  $s = \sqrt{\frac{\sum(x - \bar{x})^2}{n-1}} = \sqrt{\frac{\sum x^2 - (\sum x)^2/n}{n-1}}$ , where  $n$  is the sample size.



$$\text{gradient} = \frac{\text{vertical height}}{\text{horizontal distance}}$$

All questions should be attempted

Do not write  
in this  
margin.

Marks

1. There are three choices of starter at a wedding at Loch Lomond  
 $\frac{1}{7}$  of guests order soup  
 $\frac{4}{11}$  of guests ordered liver pate  
 $\frac{2}{7}$  ordered prawn cocktail  
The rest ordered chicken skewers  
What fraction of guests ordered chicken skewers?

3

2. Sarah thinks that the answer to the following calculation is 81.2

$$30.4 - 3.5 \times 3 + 0.5$$

Is Sarah correct?  
Justify your answer.

Marks

3. Jane bought 500 shares in a company at £3.60 per share  
She sold them all for £5.50 per share.  
She paid 5% commission of the total selling price.  
Calculate her total profit.

4

4. Write all of the following from smallest to biggest

23%, 0.227,  $\frac{2}{7}$ , 0.26

Justify your answer

2

Marks

5. Uzair works at a dental surgery.

He is paid £12.40 an hour as a standard wage, but gets paid **double** for every hour at the weekend. His shifts this week are written below.

Monday: 9am - 6pm

Tuesday: 9am to 6pm

Wednesday: 8am - 4pm

Friday: 1pm to 5pm

Saturday: 9am - noon

Calculate Uzairs wage for the week.

4

6. Frank flies from Moscow to Tokyo.

The flight leaves Moscow at 10.20pm local time.

The flight is 3 hours and 15 mins long.

The plane arrives at 7.35am local time.

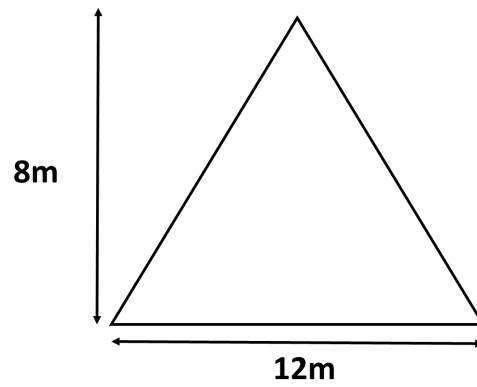
What is the time difference between Moscow and Tokyo?

3



Marks

7. The sign for a new shop has an isosceles triangle on it.



- a) Find the perimeter of the triangle

3

LED lights go around the sign. It cost £2.50 for every meter.

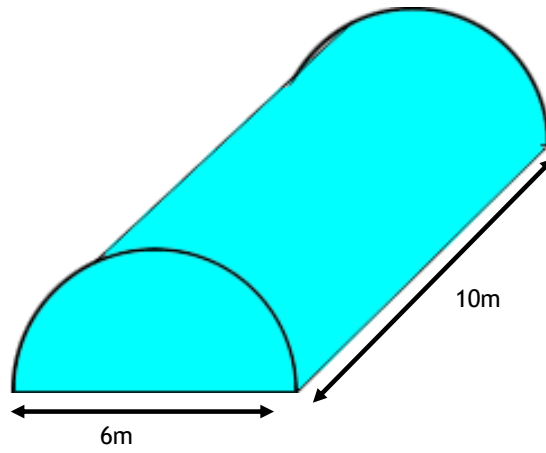
- b) How much does it cost to put LED lights around the entire triangle.

2

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Marks

8. The dimensions of a cylindrical greenhouse at a garden centre are shown,



Calculate the volume of the greenhouse.  
[Take  $\pi = 3.14$ ]

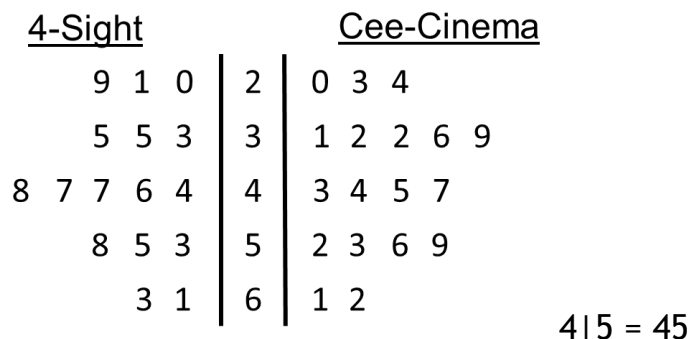
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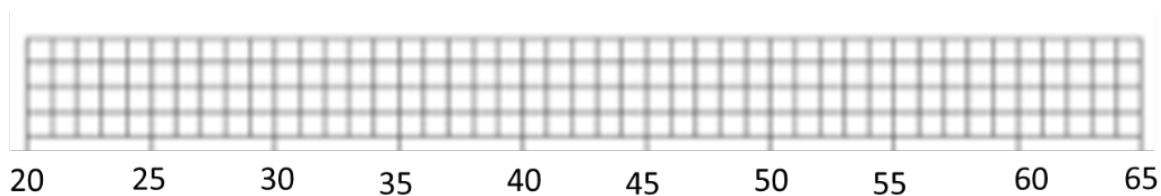


Marks

9. The amount of people viewing films from two cinemas is drawn on a stem and leaf diagram.



- a) Construct a box plot for people who went to *Cee-Cinema*. 3



- b) Seats in 4-sight sell for £8 each. What is the difference in profit between the lowest attended film and the highest attended film? 3

*Marks*

10. Pupils in a class were asked how they travel to school. The results were recorded in the table below.

Car	Bus	Train	Walk
13	6	5	8

If a pupil in the class was picked at random, what is the probability that one of them walked to school as a **percentage**?

**3**

11. A chain of shops looks at their weekly profit in 10 stores across the Falkirk area.

It is expected that everyone's weekly profit will be with a range of £12,000  $\pm$ 2500

The following is a list of the weekly profits.

13600	6600	14050	12800	13400
9100	11200	15600	12900	7800

- a) State what **percentage** of the stores are **below** the expected weekly profit.
- b) Find the median and the SIQR of the weekly profits.

The same chain of shops has 10 stores across the Edinburgh area. Their median profit was £11400 and the SIQR was £4000.

- c) Make **two** comparisons with the Falkirk area shops and those in Edinburgh.