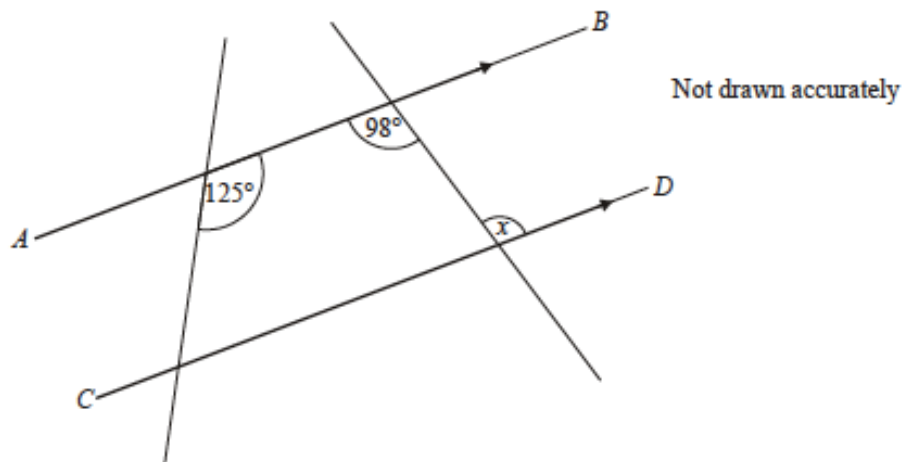


Revision F3 (Topics 1-7) [38]

1.

The lines AB and CD are parallel.



Work out the value of x .
Give a reason for your answer.

(Total 2 marks)

2.

Rationalise the denominator and simplify fully $\frac{18}{\sqrt{2}}$

(Total 2 marks)

3.

Find an approximate value of

$$\frac{289 \times 4.13}{0.19}$$

You **must** show all your working.

(Total 3 marks)

4.

(a) Write 0.000 000 397 in standard form.

(1)

(b) Evaluate $\frac{6 \times 10^7}{8 \times 10^{11}}$

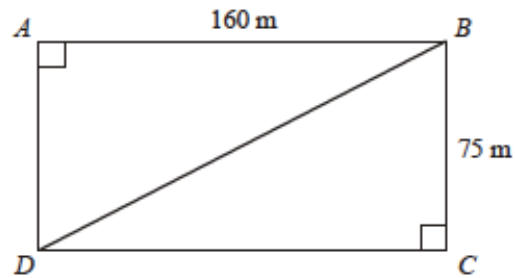
Give your answer in standard form.

(2)

(Total 3 marks)

5.

A rectangular field $ABCD$ is shown.
The length of the field, $AB = 160$ m.
The width of the field, $BC = 75$ m.



Not to scale

(a) Calculate the length of the diagonal BD .

Give your answer to a suitable degree of accuracy.

(4)

(b) Calculate the size of angle ADB .

(3)

(Total 7 marks)

6.

The distance from the Earth to the Sun is 93 million miles.

Assume

it takes 365 days for the Earth to travel once around the Sun
the Earth travels in a circle with the Sun at the centre.

(a) Work out the average speed of the Earth in miles per hour.

[4 marks]

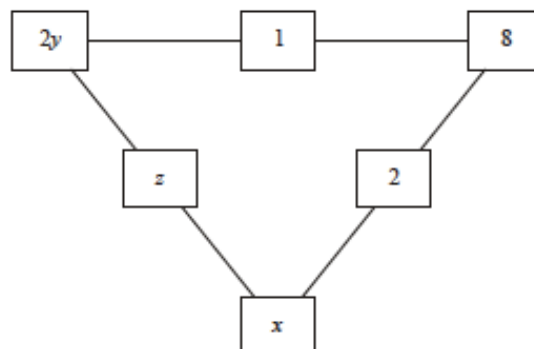
(b) It actually takes $365\frac{1}{4}$ days for the Earth to travel once around the Sun.

How does this affect your answer to part (a)?

[1 mark]

7.

The total for the three numbers along each side of the triangle is 17.



Find the values of x , y and z .

(Total 4 marks)

8.

The total number of marks for a test is 40.

- (a) The marks are divided between Section A and Section B in the ratio 4 : 1.
How many marks are there for Section A?

(2)

- (b) Shahid gains 24 marks out of 40 in the test.

Work out his mark as a percentage.

(2)

(Total 4 marks)

9.

- (a) Which one of $\frac{5}{6}$, $\frac{7}{8}$ and $\frac{9}{10}$ is a recurring decimal?

Show clearly how you made your decision.

(2)

- (b) Change $\frac{3}{11}$ to a recurring decimal.

(2)

(Total 4 marks)

10.

A crane has a cable with a breaking strain of 5300 kg measured to 2 significant figures.
It is used to lift crates which weigh 100 kg measured to the nearest 10 kg.

What is the greatest number of crates that can be lifted at one time so that the cable does not break?

(Total 4 marks)