Angles and Triangles

Question Paper

Level	IGCSE
Subject	Maths
Exam Board	Edexcel
Topic	Shape, Space and Measures
Sub Topic	Angles and triangles
Booklet	Question Paper

Time Allowed: 30 minutes

Score: /25

Percentage: /100

Grade Boundaries:

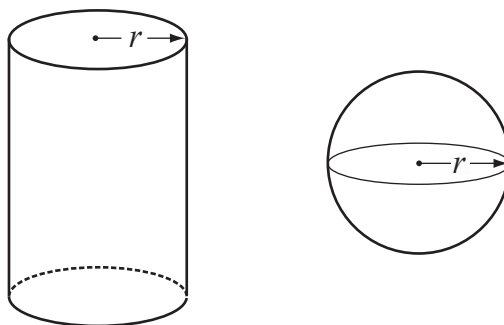| 9	8	7	6	5	4	3	2	1
>90%	80%	70%	60%	50%	40%	30%	20%	10%

1

Diagram **NOT**
accurately drawn

The diagram shows a solid cylinder and a solid sphere.
The cylinder has radius r.
The sphere has radius r.

Given that $\dfrac{\textbf{Total surface area of cylinder}}{\text{Surface area of sphere}} = 2$

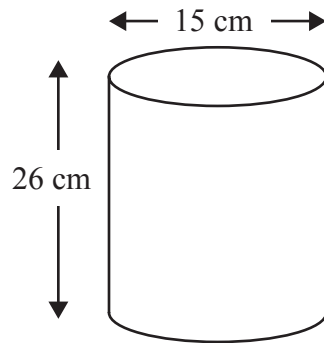find the value of $\dfrac{\text{Volume of cylinder}}{\text{Volume of sphere}}$

....

(Total for Question 1 is 5 marks)

2

← 15 cm →

Diagram **NOT**
accurately drawn

26 cm

A cylinder has a diameter of 15 cm and a height of 26 cm.

Work out the volume of the cylinder.
Give your answer correct to 3 significant figures.

.... cm^3

(Total for Question 2 is 3 marks)

3

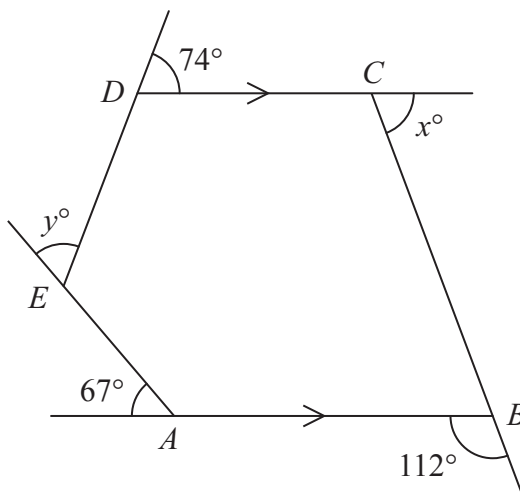
Diagram **NOT**
accurately drawn

The diagram shows a pentagon *ABCDE*.
DC is parallel to *AB*.

The size of an exterior angle at *A* is 67°
The size of an exterior angle at *B* is 112°
The size of an exterior angle at *C* is *x*°
The size of an exterior angle at *D* is 74°
The size of an exterior angle at *E* is *y*°

(a) (i) Work out the value of *x*.

x = ...

(ii) Work out the value of *y*.

y = ...

(4)

(b) Work out the sum of the interior angles of the pentagon *ABCDE*.

°

....
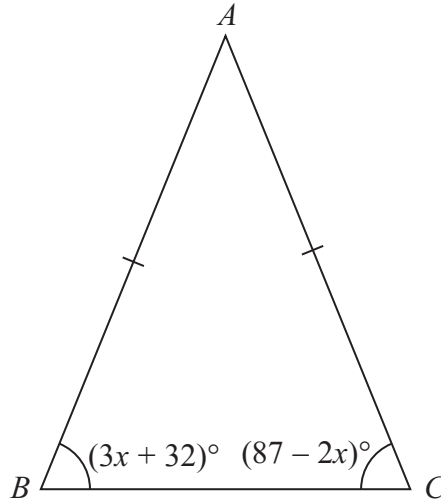
(2)

(Total for Question 3 is 6 marks)

4

Diagram **NOT** accurately drawn

In the isosceles triangle *ABC*,
AB = *AC*
angle *B* = $(3x + 32)°$
angle *C* = $(87 - 2x)°$

Work out the value of *x*.
Show clear algebraic working.

$x = $ ....
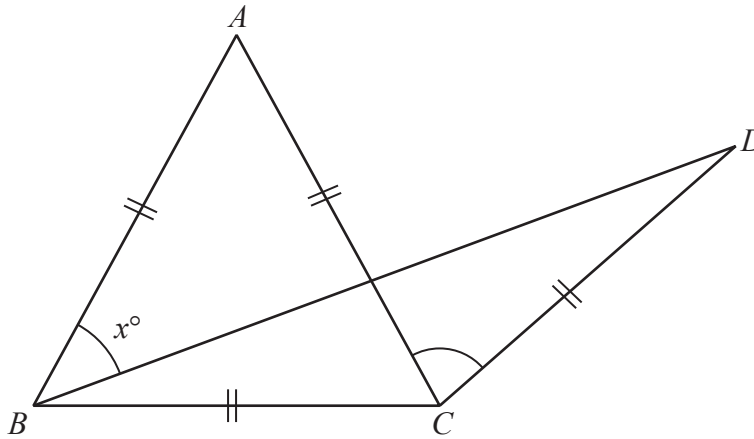
(Total for Question 4 is 4 marks)

5

Diagram **NOT**
accurately drawn

The diagram shows an equilateral triangle ABC and an isosceles triangle BCD.
$AB = AC = BC = CD$.
Angle $ABD = x°$

Express the size of angle ACD in terms of $x°$, giving your answer as simply as possible.
Give a reason for each step in your working.

.... °

(Total for Question 5 is 4 marks)

6

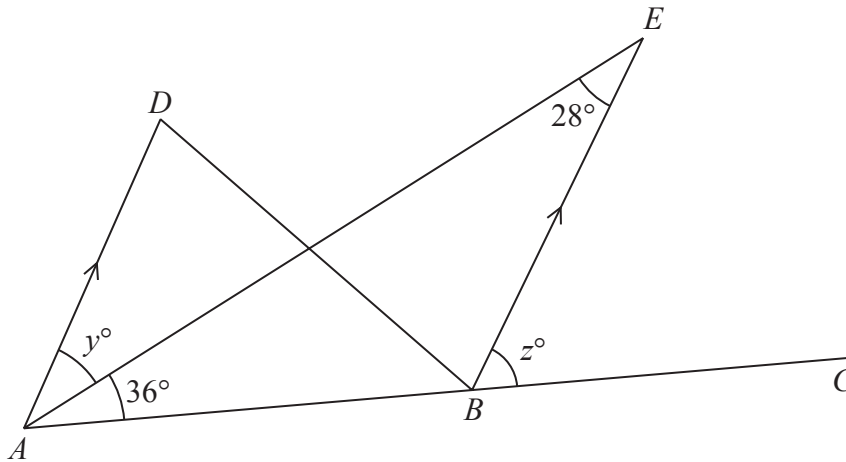

Diagram **NOT**
accurately drawn

ADB and *AEB* are triangles.
ABC is a straight line.
AD is parallel to *BE*.

(a) Find the value of *y*.

$y =$ ....
(1)

(b) Find the value of *z*.

$z =$ ....
(2)

(Total for Question 6 is 3 marks)