

S2

Space exam review

1

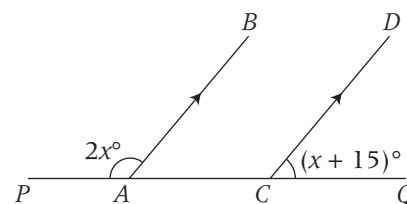


Diagram **NOT** accurately drawn

$PACQ$ is a straight line.
 AB and CD are parallel.
Angle $PAB = (2x)^\circ$.
Angle $QCD = (x + 15)^\circ$.

Work out the value of x .

$x = \dots\dots\dots$

(Total 3 marks)

2 The size of each exterior angle of a regular polygon is 24° .

Work out the number of sides the polygon has.

$\dots\dots\dots$

(Total 2 marks)

3

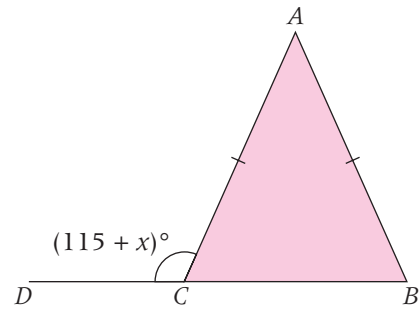


Diagram **NOT** accurately drawn

$AB = AC$.
 BCD is a straight line.
 Angle $ACD = (115 + x)^\circ$.

Find, in terms of x , the size of angle BAC .
 Give your answer in its simplest form.

Angle $BAC = \dots\dots\dots^\circ$

(Total 3 marks)

4 $ABCDE$ is a regular pentagon.
 AEF and CD are straight lines.

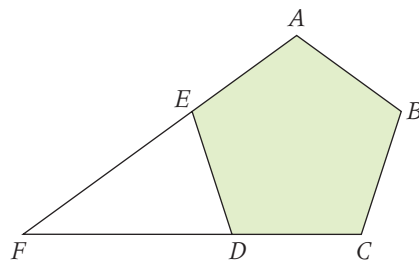


Diagram **NOT** accurately drawn

Work out the size of angle DFE .
 Give your reason for your answer.

$\dots\dots\dots^\circ$

(Total 3 marks)

5

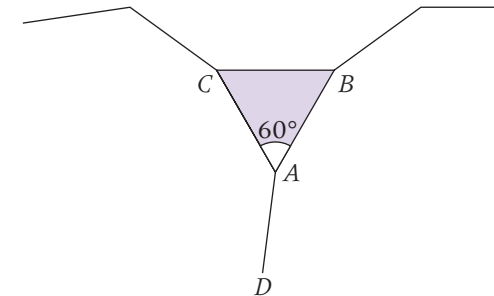


Diagram **NOT** accurately drawn

The sides of an equilateral triangle ABC and two **regular** polygons meet at the point A .
 AB and AD are adjacent sides of a regular 10-sided polygon.
 AC and AD are adjacent sides of a regular n -sided polygon.
 Work out the value of n .

$n = \dots\dots\dots$

(Total 5 marks)

6

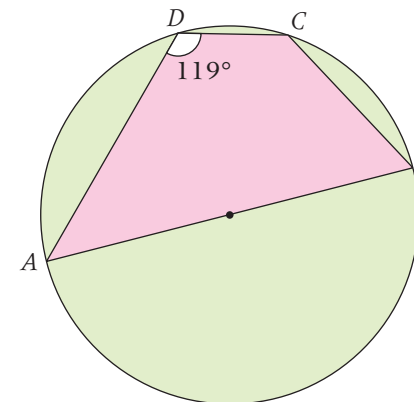


Diagram **NOT** accurately drawn

A, B, C and D are points on the circumference of a circle.
 AB is a diameter of the circle.
 Angle $ADC = 119^\circ$.

a i Work out the size of angle ABC .

.....°

ii Give a reason for your answer.

.....

(2)

b Work out the size of angle BAC .

.....°

(2)

7

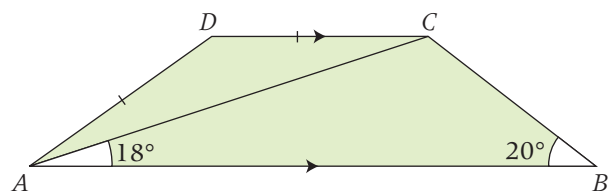


Diagram **NOT** accurately drawn (Total 4 marks)

$ABCD$ is a trapezium.
 AB is parallel to DC .
 Angle $BAC = 18^\circ$.
 Angle $ABC = 20^\circ$.
 $AD = DC$.

Calculate the size of angle ADC .
 Give a reason for each step in your working.

.....°

(Total 5 marks)

8 A, B, C and D are points on a circle.
 Angle $BAC = 40^\circ$.
 Angle $DBC = 55^\circ$.

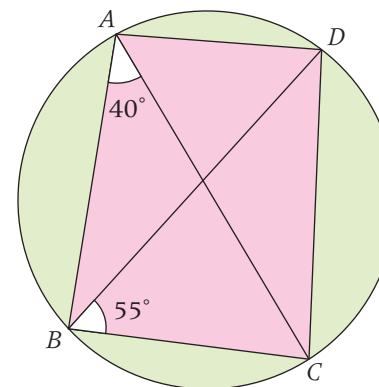


Diagram **NOT** accurately drawn

a i Find the size of angle DAC .

.....°

ii Give the reason for your answer.

.....

(2)

b i Calculate the size of angle DCB .

.....°

ii Give the reasons for your answer.

.....

(3)

c Is BD a diameter of the circle?

.....°

Give a reason for your answer.

.....

(1)

(Total 6 marks)

- 9 In the diagram, ABC and ADE are straight lines.
 CE and BD are parallel.
 $AB = AD$.
Angle $BAD = 38^\circ$.

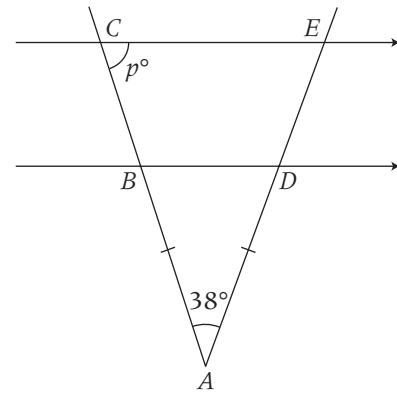


Diagram **NOT** accurately drawn

Work out the value of p .
Give a reason for each step in your working.

$p = \dots\dots\dots$

(Total 4 marks)

- 10

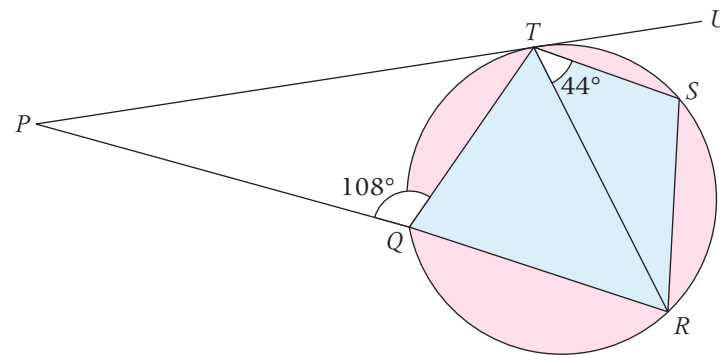


Diagram **NOT** accurately drawn

- Q, R, S and T are points on the circumference of a circle.
 PT is a tangent to the circle at T .
 PQR is a straight line.
Angle $PQT = 108^\circ$.
Angle $STR = 44^\circ$.

Work out the size of angle STU .
You must give a reason for each step in your working.

$\dots\dots\dots^\circ$

(Total 5 marks)