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National 5 Maths
Area of a Triangle

SQA past paper and specimen paper questions and answers by topic

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National 5 Maths
SQA 2014 Paper 2
Question 13

National 5 Maths
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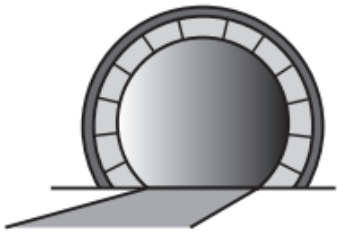
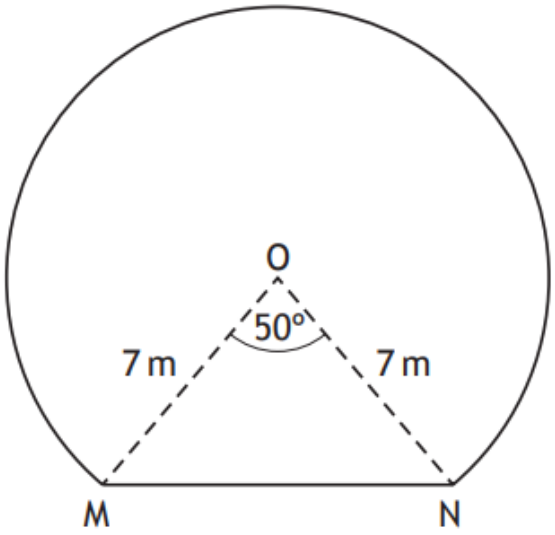
The picture shows the entrance to a tunnel which is in the shape of part of a circle.



The diagram below represents the cross-section of the tunnel.

- The centre of the circle is O.
- MN is a chord of the circle.
- Angle MON is 50°.
- The radius of the circle is 7 metres.



Calculate the area of the cross-section of the tunnel. **5**

Answer:

151.3 m^2

National 5 Maths
SQA 2015 Paper 2
Question 11

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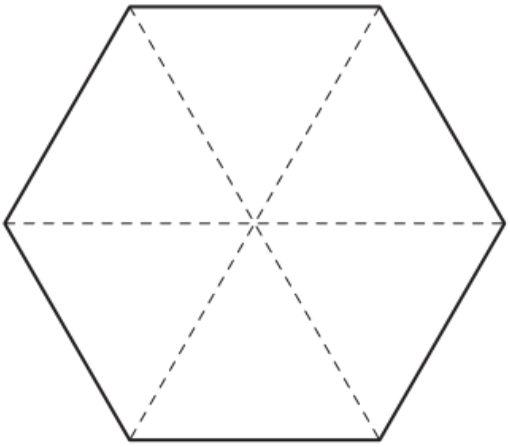
The top of a table is in the shape of a regular hexagon.

The three diagonals of the hexagon which are shown as dotted lines in the diagram below each have length 40 centimetres.



Calculate the area of the top of the table. **4**

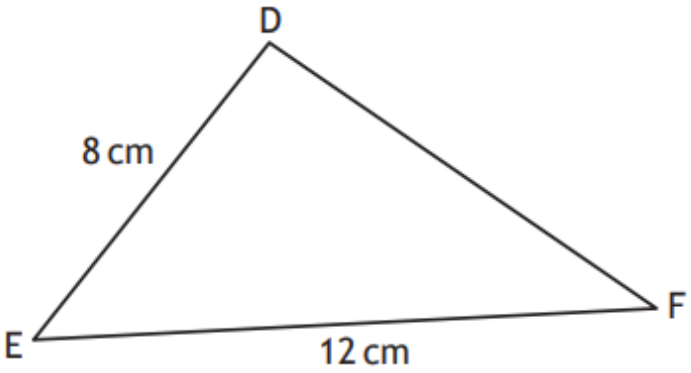
Answer:

1039.2 cm^2

National 5 Maths
SQA 2017 Paper 1
Question 7

In triangle DEF:

- DE = 8 centimetres
- EF = 12 centimetres
- $\sin E = \frac{2}{3}$



Calculate the area of triangle DEF. **2**

Answer:

32 cm^2

National 5 Maths
SQA 2018 Paper 2
Question 17

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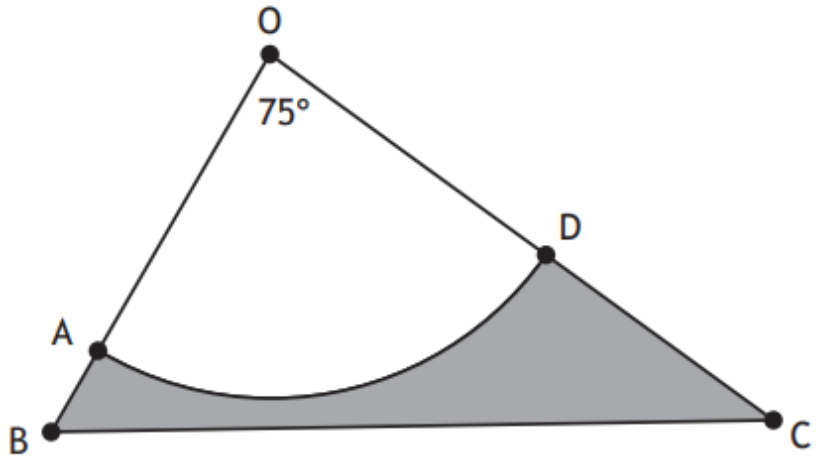
In the diagram below AOD is a sector of a circle, with centre O, and BOC is a triangle.



In sector AOD:

- radius = 30 centimetres
- angle AOD = 75°.

In triangle OBC:

- OB = 38 centimetres
- OC = 55 centimetres.

Calculate the area of the shaded region, ABCD. **5**

Answer:

420.3 cm^2

National 5 Maths
SQA 2019 Paper 2
Question 3

National 5 Maths
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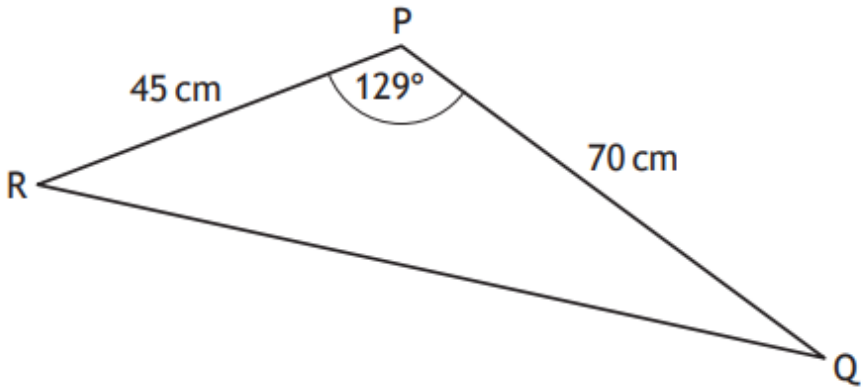
The diagram shows triangle PQR.



- PR = 45 centimetres
- PQ = 70 centimetres
- Angle QPR = 129°

Calculate the area of triangle PQR. **2**

Answer:

1224.0 cm^2

National 5 Maths
SQA 2021 Paper 2
Question 8

National 5 Maths
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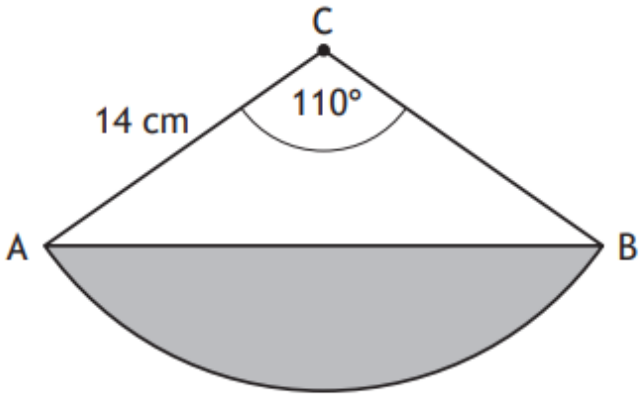
The diagram shows a sector of a circle, with centre C and radius 14 centimetres.

Angle ACB is 110°.



AB splits the sector into the shaded segment and triangle ABC.

Find the area of the shaded segment. **5**

Answer:

96.1 cm^2

National 5 Maths
SQA 2022 Paper 2
Question 6

National 5 Maths
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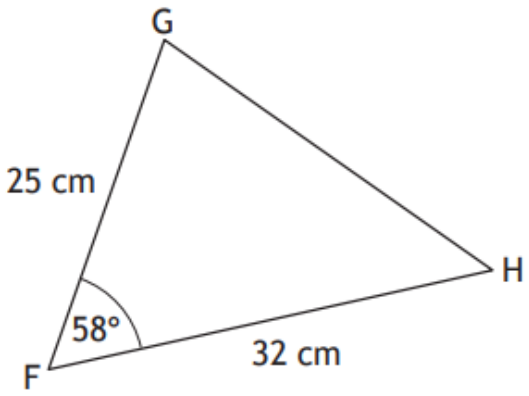
The diagram shows triangle FGH.

- FG = 25 centimetres
- FH = 32 centimetres
- Angle GFH = 58°



Calculate the area of triangle FGH. 2

Answer:

339.2 cm²

National 5 Maths
SQA 2023 Paper 2
Question 15

National 5 Maths
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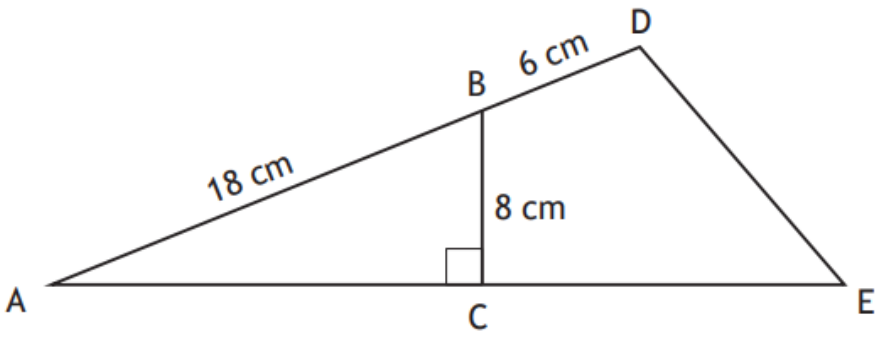
In the diagram:

- AC is perpendicular to BC
- AB = 18 centimetres
- BD = 6 centimetres
- BC = 8 centimetres.



The **area** of triangle ADE is 160 square centimetres.

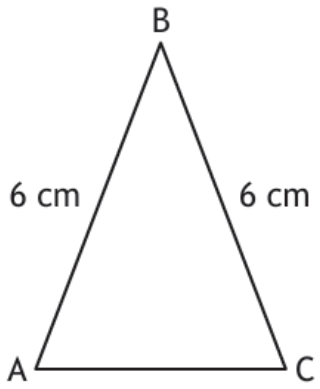
Calculate the length of AE. **4**

Answer:

30 cm

National 5 Maths
SQA 2025 Paper 1
Question 5

Triangle ABC is shown in the diagram.



- AB = BC = 6 centimetres.
- $\sin B = \frac{2}{3}$.

Calculate the area of the triangle. **2**

Answer:

12 cm^2