National 5 Mathematics

Area of a Triangle - Solutions

Marks are indicated in brackets after each question number

2017 Paper 1 Question 7, (2)

$\text{Area} = \frac{1}{2}df\sin E$

$= \frac{1}{2}\ x\ 12\ x\ 8\ x \frac{2}{3}$

$= 32\ cm^2.$

2018 Paper 2 Question 17, (5)

$\text{Area of Triangle} = \frac{1}{2}(38)(55)\sin 75$

$= 1009.39\ cm^2.$

$\text{Area of Sector} = \frac{75}{360}\ x\ \pi\ x\ 60$

$= 39.27\ cm^2.$

$\text{Shaded Area} = 1009.39 - 39.27$

$= 970.12\ cm^2.$

2019 Paper 2 Question 3, (2)

$\text{Area} = \frac{1}{2}\ x\ 45\ x\ 70\ x\ \text{Sin}\ 129°$

$= 1{,}224\ cm^2.$

2022 Paper 2 Question 6, (2)

$\text{Area} = \frac{1}{2}gh\sin F$

$= \frac{1}{2}\ x\ 32\ x\ 25\ x \sin 58$

$= 339.2\ cm^2$

2025 Paper 1 Question 5, (2)

$$\text{Area} = \frac{1}{2} \times 6 \times 6 \times \frac{2}{3}$$

$$= \frac{1}{2} \times 36 \times \frac{2}{3}$$

$$= 18 \times \frac{2}{3}$$

$$= 12$$

So, the area of the triangle is $12\ cm^2$