

AREA OF A TRIANGLE

SKILLS QUESTIONS

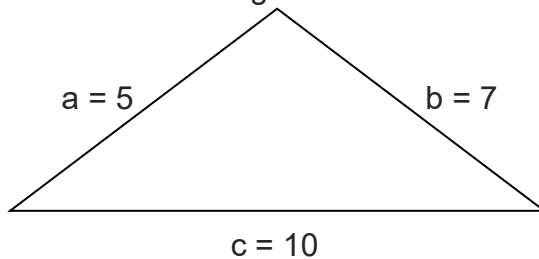
HERON'S RULE

$$s = (a + b + c) \div 2$$

$$A = \sqrt{s(s-a)(s-b)(s-c)}$$

where a, b and c are side lengths of any triangle and s is the semi-perimeter.

Q1. The sides of this triangle measure 5 cm, 7 cm and 10 cm. Use Heron's Rule to calculate the area of this triangle.

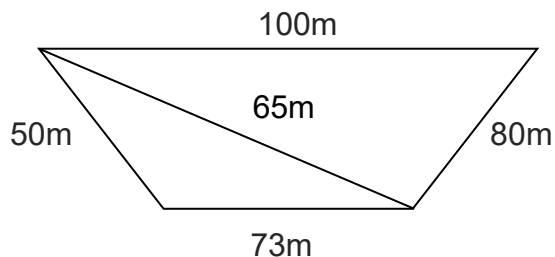


$$\begin{aligned}
 s &= (a + b + c) \div 2 \\
 &= (5 + 7 + 10) \div 2 \\
 &= 11 \\
 A &= \sqrt{s(s-a)(s-b)(s-c)} \\
 &= \sqrt{11(11-5)(11-7)(11-10)} \\
 &=
 \end{aligned}$$

Q2. Find the area of triangles whose side lengths a, b and c are shown in the table.

	Side a	Side b	Side c	s	Area
(a)	3	5	6		
(b)	4	6	8		
(c)	40	45	63		
(d)	25	27	46		
(e)	120	135	147		

Q3. Find the area of this farm that has been divided into two triangular sections.



ANSWERS

Q1. 16.25 cm^2

Q2. (a) 21.17

(b) 45

(c) 93300.82

(d) 11088

(e) 7617.45

Q3. 5375.18 m^2