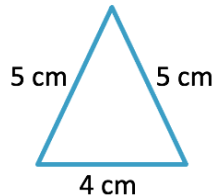


# Area of a Triangle with Three Known Sides

## Answers

Use Heron's formula to find the area of the following triangles:

a)

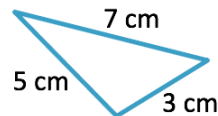


$$s = (5 + 5 + 4) \div 2 = 7$$

$$A = \sqrt{(7 \times 2 \times 2 \times 3)}$$

$$= \mathbf{9.17 \text{ cm}^2}$$

b)

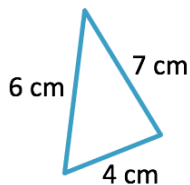


$$s = (5 + 7 + 3) \div 2 = 7.5$$

$$A = \sqrt{(7.5 \times 2.5 \times 0.5 \times 4.5)}$$

$$= \mathbf{6.50 \text{ cm}^2}$$

c)

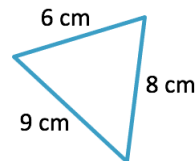


$$s = (6 + 7 + 4) \div 2 = 8.5$$

$$A = \sqrt{(8.5 \times 2.5 \times 1.5 \times 4.5)}$$

$$= \mathbf{11.98 \text{ cm}^2}$$

d)

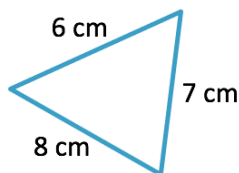


$$s = (9 + 6 + 8) \div 2 = 11.5$$

$$A = \sqrt{(11.5 \times 2.5 \times 5.5 \times 3.5)}$$

$$= \mathbf{23.53 \text{ cm}^2}$$

e)

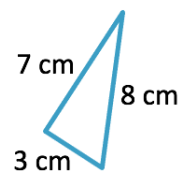


$$s = (6 + 7 + 8) \div 2 = 10.5$$

$$A = \sqrt{(10.5 \times 4.5 \times 3.5 \times 2.5)}$$

$$= \mathbf{20.33 \text{ cm}^2}$$

f)



$$s = (7 + 8 + 3) \div 2 = 9$$

$$A = \sqrt{(9 \times 2 \times 1 \times 6)}$$

$$= \mathbf{10.39 \text{ cm}^2}$$