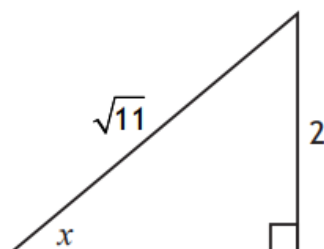


Higher Maths  
SQA 2018 Paper 1  
Question 13



The right-angled triangle in the diagram is such that  $\sin x = \frac{2}{\sqrt{11}}$  and  $0 < x < \frac{\pi}{4}$ .



(a) Find the exact value of:

(i)  $\sin 2x$

3

(ii)  $\cos 2x$ .

1

(b) By expressing  $\sin 3x$  as  $\sin(2x + x)$ , find the exact value of  $\sin 3x$ .

3

Answers:

(a) (i)  $\frac{4\sqrt{7}}{11}$

(ii)  $\frac{3}{11}$

(b)  $\frac{34}{11\sqrt{11}}$