1 Show that $\frac{\sqrt{8}}{\sqrt{8}-2}$ can be written in the form $n+\sqrt{n}$, where n is an integer.

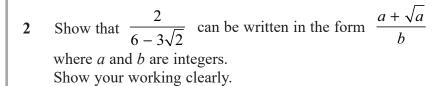
Show your working clearly.

(3)

(b) Show that $\frac{\sqrt{20} + \sqrt{80}}{\sqrt{3}}$ can be expressed in the form \sqrt{a} where a is an integer.

Show your working clearly.

(3)



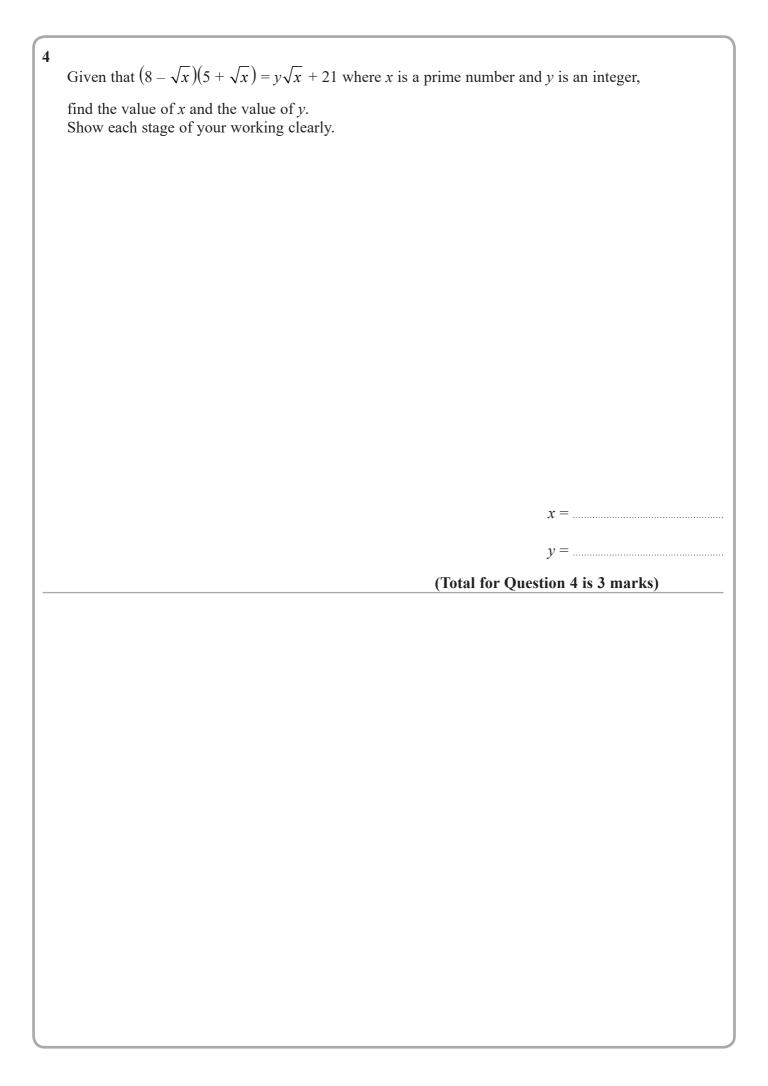
(3)

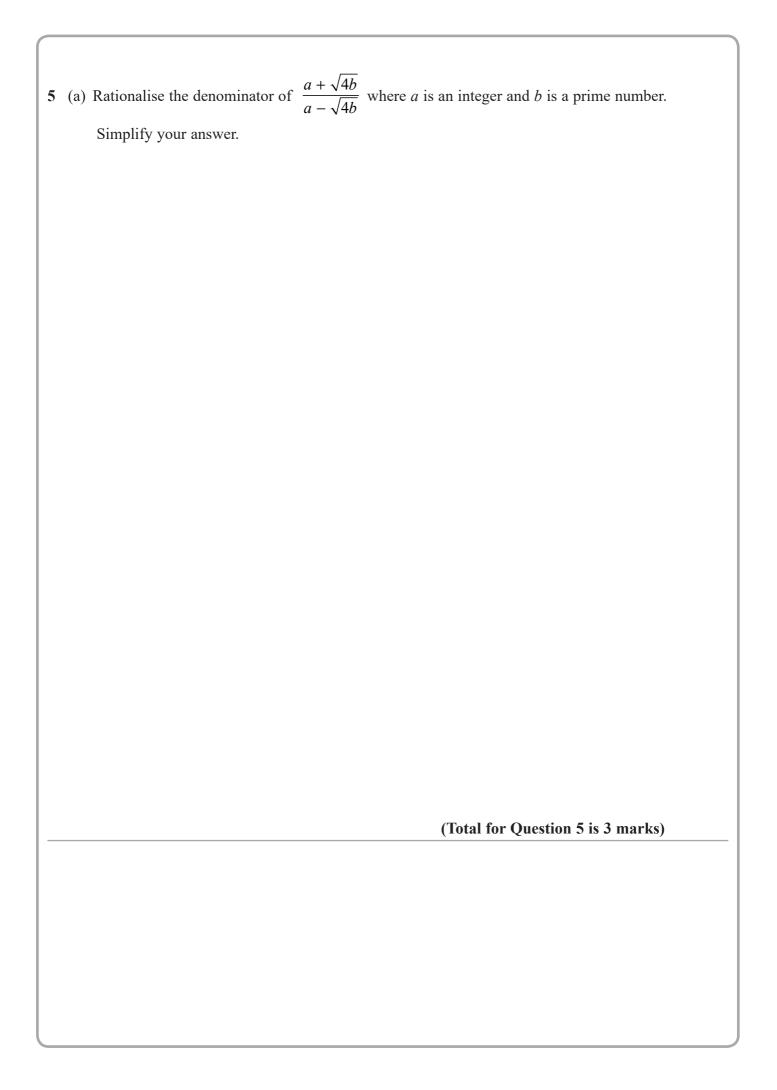
Given that y is a prime number,

(b) express
$$\frac{3}{2-\sqrt{y}}$$
 in the form $\frac{a+b\sqrt{y}}{c-y}$ where a, b and c are integers.

(2)







_	
6	
v	

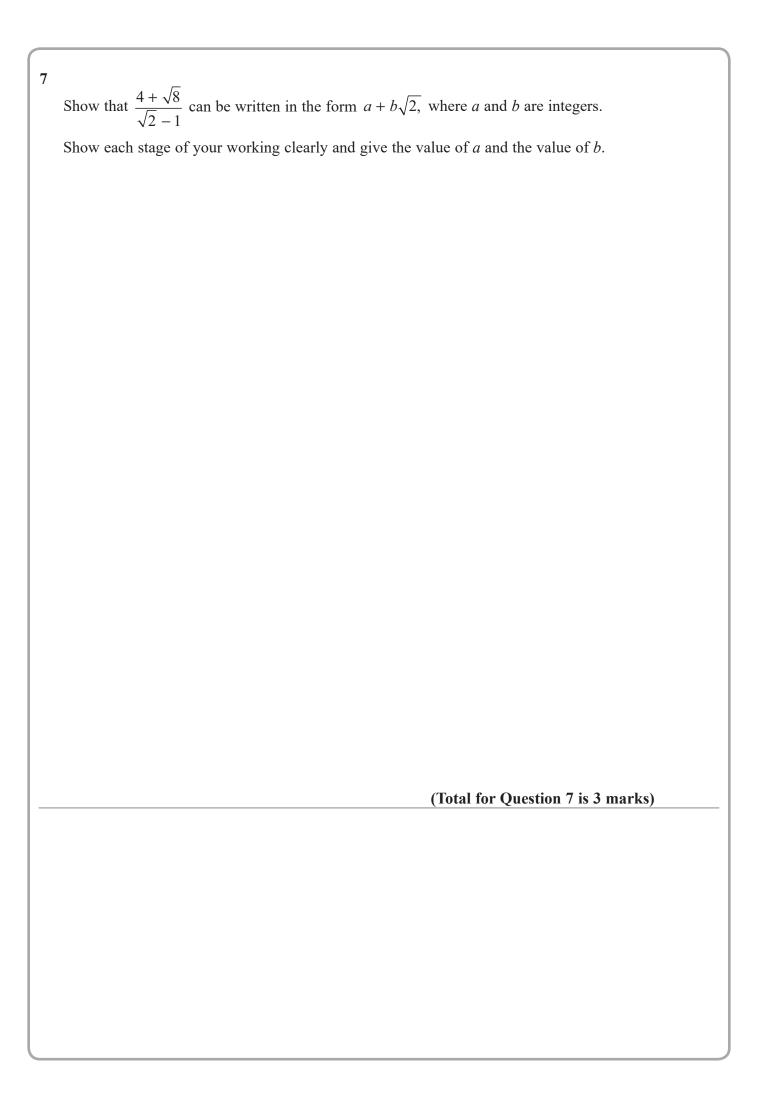
(a) Show that $(6 + 2\sqrt{12})^2 = 12(7 + 4\sqrt{3})$ Show each stage of your working.

(3)

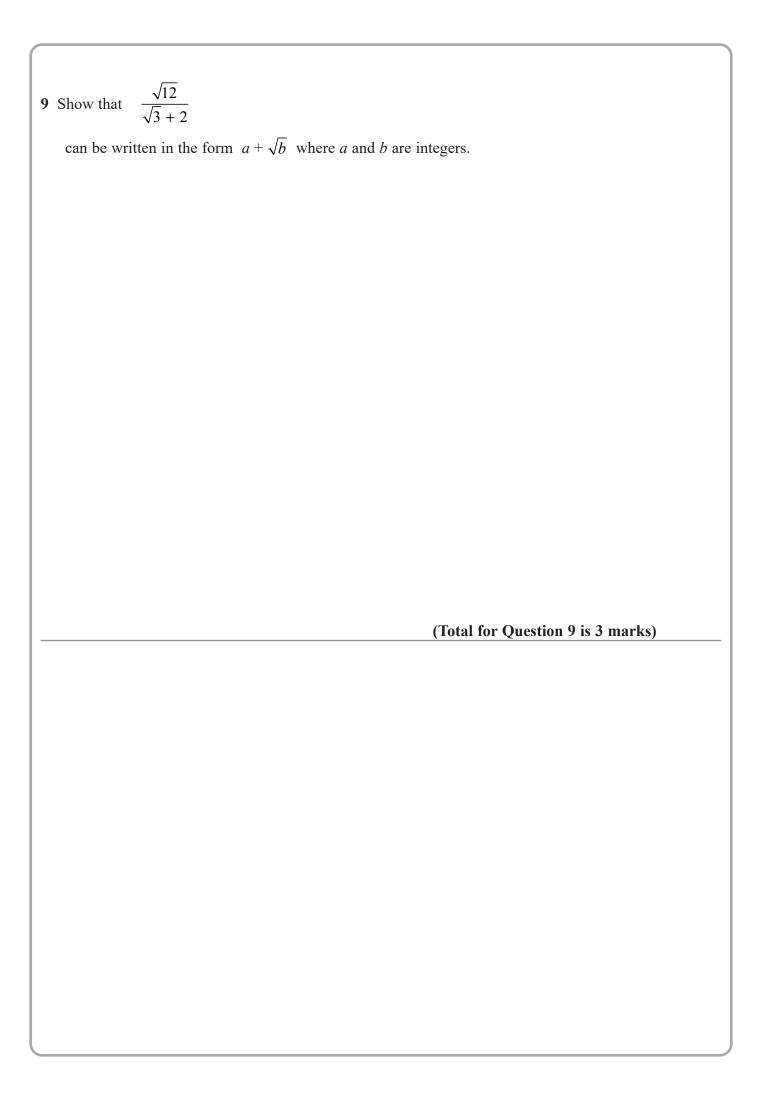
(b) Without using a calculator, rationalise the denominator of $\frac{6}{3-\sqrt{7}}$

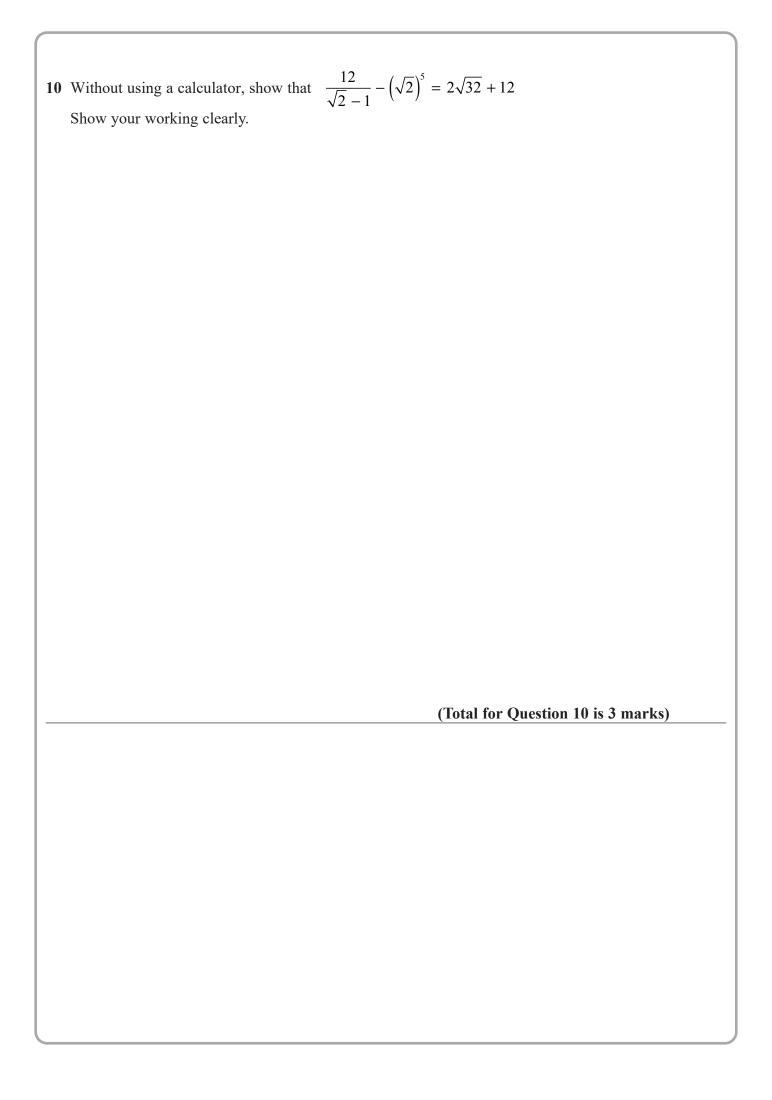
Simplify your answer.

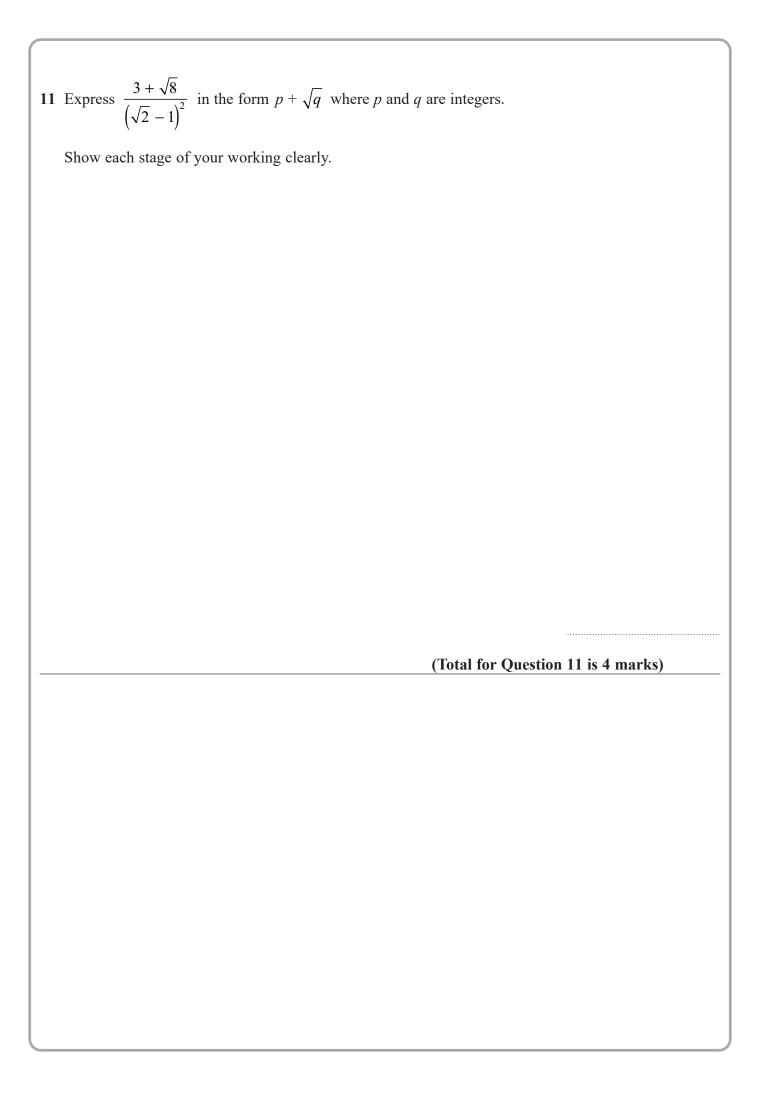
You must show each stage of your working.

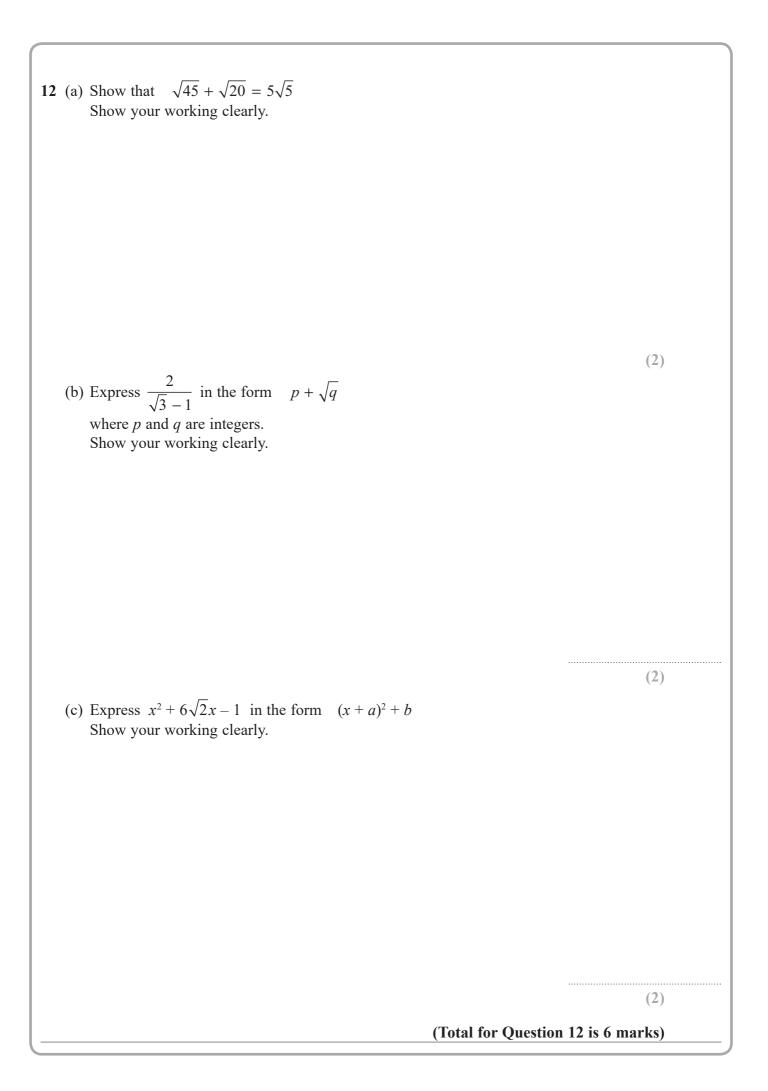


8 E	Express $\frac{8}{\sqrt{5}-1}$ in the form $\sqrt{a}+b$ where a and b are integers.
	Show each stage of your working clearly.
	(Total for Question 8 is 3 marks)
	(20000000000000000000000000000000000000









13 The area of a rectangle is 18 cm ²			
The length of the rectangle is $(\sqrt{7} + 1)$ cm.			
Without using a calculator and showing each stage of your working,			
find the width of the rectangle. Give your answer in the form $a\sqrt{b} + c$ where a , b and c are integers.			
	cm		
(Total for Question 13 is 3 marks)			