Name: _____

GCSE (1 - 9)

Surds

Instructions

- Use **black** ink or ball-point pen.
- Answer all questions.
- Answer the questions in the spaces provided
- there may be more space than you need.
- Diagrams are NOT accurately drawn, unless otherwise indicated.
- You must show all your working out.

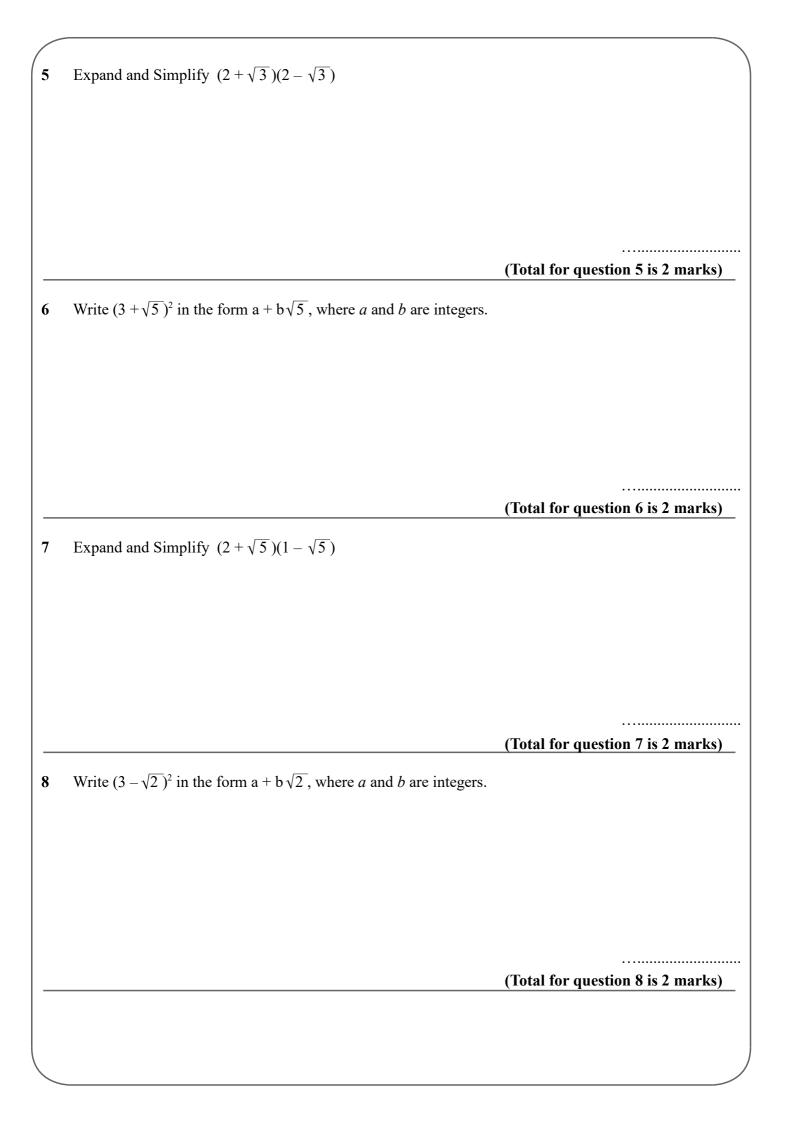
Information

- The marks for each question are shown in brackets
- use this as a guide as to how much time to spend on each question.

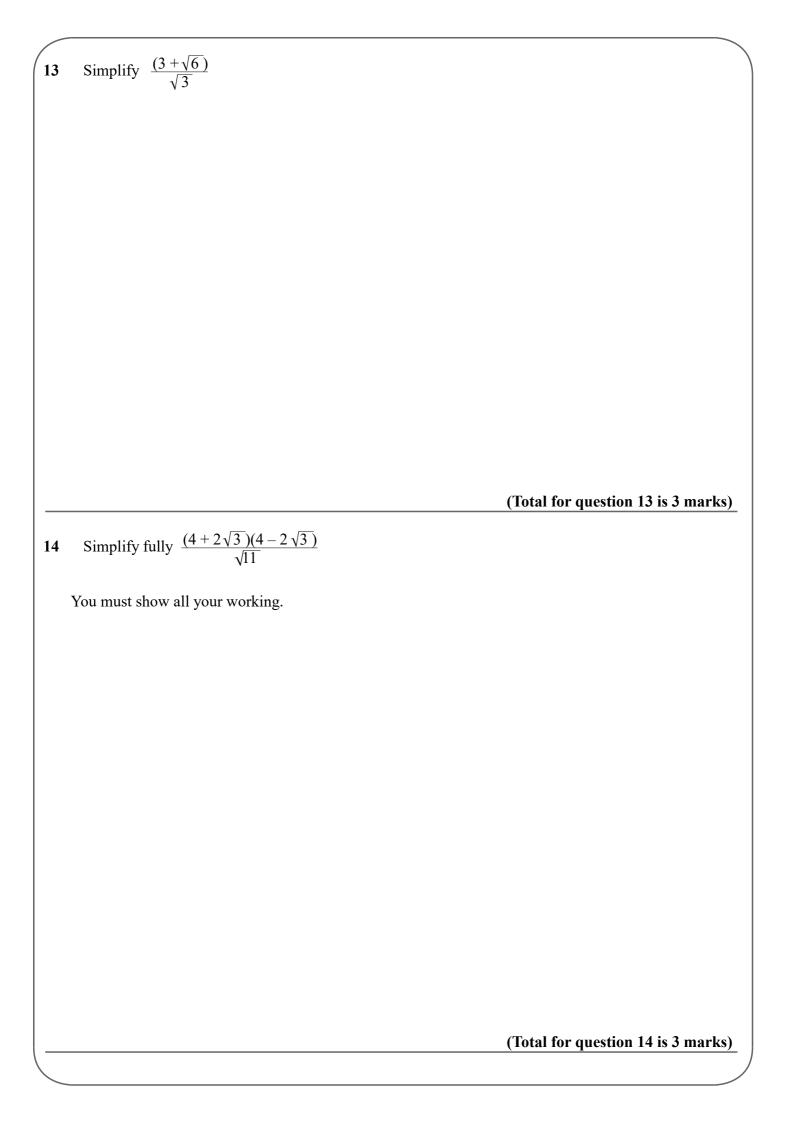
Advice

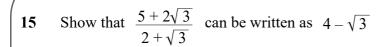
- Read each question carefully before you start to answer it.
- Keep an eye on the time.
- Try to answer every question.
- · Check your answers if you have time at the end

	(Total for question 1 is 2 marks)
Write $\sqrt{50}$ in the form $k\sqrt{2}$, where k is an integer.	
Write $5\sqrt{27}$ in the form $k\sqrt{3}$, where k is an integer.	(Total for question 2 is 2 marks)
Write $7\sqrt{20}$ in the form $k\sqrt{5}$, where k is an integer.	(Total for question 3 is 2 marks)
	(Total for question 4 is 2 marks)
	Write $5\sqrt{27}$ in the form $k\sqrt{3}$, where k is an integer.



(Total for question 9 is 2 marks)
(Total for question 10 is 2 marks
1
(T) () (C) (1) (1) (A) (A)
(Total for question 11 is 2 marks
(Total for question 12 is 2 marks

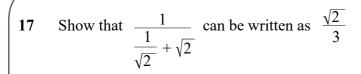




(Total for question 15 is 3 marks)

16 Show that $\frac{3\sqrt{3}+3}{3+\sqrt{3}}$ can be written as $\sqrt{3}$

(Total for question 16 is 3 marks)



(Total for question 17 is 3 marks)

18 Show that
$$\frac{2}{\frac{1}{\sqrt{3}} + 1}$$
 can be written as $3 - \sqrt{3}$

