

Quadratic Inequalities

For Pearson Edexcel GCSE Mathematics (1MA1) • Higher tier

Name _____

Total marks: **30**

Answer **all** questions in the spaces provided. Show your working: marks are given for correct method.

1 (a) Solve $x^2 < 49$

.....
(2)

(b) Solve $5x^2 > 45$

.....
(2)
(Total for Question 1 is 4 marks)

2 Solve $x^2 - 9x + 14 < 0$

.....
(3)
(Total for Question 2 is 3 marks)

3 Solve $3x^2 + 5x - 2 \geq 0$

.....
(3)

(Total for Question 3 is 3 marks)

4 Solve $2x^2 \leq 18$
Write your answer using set notation.

.....
(3)

(Total for Question 4 is 3 marks)

5 Solve $(3 - 2x)(x + 4) < 0$

.....
(3)

(Total for Question 5 is 3 marks)

6 (a) Factorise $6x^2 + x - 12$

.....
(2)

(b) Hence, or otherwise, solve $6x^2 + x - 12 < 0$

.....
(2)
(Total for Question 6 is 4 marks)

7 Solve $(x - 2)^2 < \frac{9}{16}$

.....
(3)
(Total for Question 7 is 3 marks)

8 Find the set of values of x for which $x^2 - 4x - 12 > 0$ and $2x + 1 > 3$

.....
(4)
(Total for Question 8 is 4 marks)

9 Solve the inequality $2x(x - 1) \leq 3(x + 1)$

.....

(3)

(Total for Question 9 is 3 marks)
