Name:

Level 2 Further Maths

Inequalities

Corbettmaths

Ensure you have: Pencil or pen

Guidance

1. Read each question carefully before you begin answering it.
2. Check your answers seem right.
3. Always show your workings

Revision for this topic

www.corbettmaths.com/more/further-maths/

1. Solve the inequality $\dfrac{2 - 5x}{3} > -4$

....

(2)

2. Write down the largest integer that satisfies $\dfrac{10 - 3x}{9} > 15$

....

(3)

3.   Write down all the integer solutions to

$$-9 < \frac{x}{4} - 1 < -8$$

....
(3)

4.   Find the range of values of x that satisfies both

$$3(x + 2) \leq 30 \qquad \text{and} \qquad 4x + 3 > 21$$

....
(4)

5. Solve the inequality

$$8(x - 2) - 3(1 - x) \leq 9(x + 2) + 1$$

....
(4)

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6. $-5 < a < -1$ and $-2 < b < -1$

Write down an inequality for each of the following

(a) ab

....
(2)

(b) b^2

....
(2)

7. $-1 \leq c \leq 10$ and $-4 \leq d \leq -2$

Write down an inequality for each of the following

(a) $d - c$

....
(2)

(b) c^2

....
(2)

(c) $\dfrac{c}{d}$

....
(2)

(d) $(c + d)^2$

....
(2)

8.   Solve $x^2 \geq 36$

....
(2)

9.   Solve the inequality $x^2 - 13x + 22 < 0$

....
(3)

10.   Solve the inequality $x^2 + 9x + 18 \geq 0$

....
(3)

11. Solve the inequality $x^2 + 3x - 4 > 0$

....

(3)

12. Solve the inequality $x^2 - 4x - 32 \leq 0$

....

(3)

13. Solve the inequality $-x^2 + 3x + 10 > 0$

....

(3)

14. Solve the inequality $5x^2 + 7x + 2 > 0$

....
(4)

15. Solve the inequality $3x^2 + 8x - 3 \leq 0$

....
(4)

16. Solve the inequality $4x^2 - 11x + 6 < 0$

....
(4)

17. Solve the inequality $x^2 + 6x + 3 < 0$

Leave your answer in surd form.

....

(4)

18. Solve the inequality $(2x + 5)^2 - 3x(x + 2) > 0$

....

(4)