

(C1-3.4a) Name:

Homework Questions 4 – Solving Linear Inequalities

Solve the following inequalities, showing each stage of your working out

1. $3x + 4 > 7$

$$x > 1$$

2. $7x - 2 < 19$

$$x < 3$$

3. $3 > 4x + 11$

$$x < -2$$

4. $26 \leq 8 - 9x$

$$x \leq -2$$

5. $6x - 7 \geq 9 - 2x$

$$x \geq 2$$

6. $5x - 30 < x - 4$

$$x < 6.5$$

7. $17 - 3x \geq 9x + 41$

$$x \leq -2$$

8. $4 + 5x < 8 - 11x$

$$x < 0.25$$

9. $2(3x - 7) + 3 > 13 - 2x$

$$x > 3$$

10. $3(2x - 7) > 5(6 - x) + 4$

$$x > 5$$

11. $2(x - 7) + 12 \leq -26 + 8x$

$$x \geq 4$$

12. $8(2x - 4) - 9x \leq 3$

$$x \leq 5$$

13. $\frac{x+4}{3} + 2 > 6$

$$x > 8$$

14. $\frac{x-3}{2} - 5 \leq 7$

$$x < 27$$

Find the set of integer values for which:

15. $4(x-1) > x+2$ and $3x+5 \geq 5x-3$

$$2 < x \leq 4$$

16. $5(x-2) \geq -20$ and $7(x-3) + 2 \leq 2$

$$-2 \leq x \leq 3$$

17. $33 \geq 8x - 7 > 9$

$$2 < x \leq 5$$

18. $31 < 9x + 4 < 49$

$$3 < x < 5$$

19. $-4 \leq 3x + 2 < 11$

$$-2 \leq x < 3$$

20. $-2 < 4x + 6 \leq 22$

$$-2 < x < 4$$