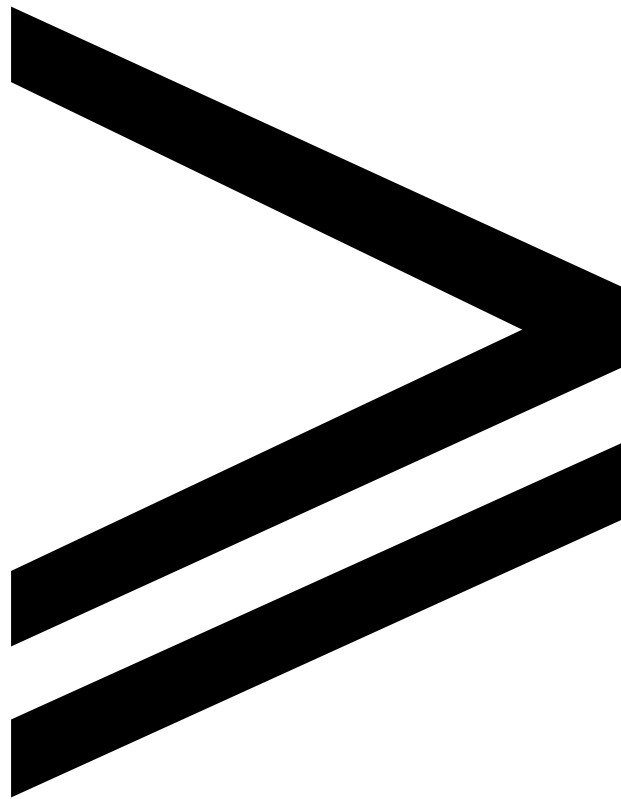


GCSE Mathematics

INEQUALITIES



Lesson 1

GCSE : Algebra of Inequalities

1.1 Solving Simple Equations & Inequalities

Do NOT use a calculator

Question 1

Solve the following equations;

(i) $x + 11 = 57$

(ii) $x - 13 = 14$

(iii) $5x = 115$

(iv) $5x + 8 = 33$

(v) $4x - 7 = 33$

(vi) $8x + 3 = 7$

(vii) $2(x + 4) = 18$

(viii) $13x = 52$

(ix) $19 - x = 8$

(x) $x + 7 = -15$

(xi) $x + 26 = 15$

(xii) $14 - x = 16$

Question 2

Study the following table;

SYMBOL	MEANING
$<$	is less than
$\leq$	is less than or equal to
$>$	is greater than
$\geq$	is greater than or equal to

For each of the following, state if the inequality written down is TRUE or FALSE.

(i) $\pounds 5 > 50\text{p}$

(ii) $\pounds 0.40 < 50\text{p}$

(iii) $1\text{kg} > 100\text{g}$

(iv) $40\text{km/h} > 50\text{mph}$

(v) $3\text{km} < 300\text{m}$

(vi) $16\text{cm} > 160\text{mm}$

Question 3

I am about to roll two standard six sided dice and add together the spots showing.
Which of the following is ***always true*** about the number of spots showing ?

spots ≥ 25 spots < 2 spots > 8 spots ≤ 12

Question 4

I was born in June but it was so long ago that I have forgotten what date in June.
Which of the following is ***definitely true*** about that date.

date = 1st date $\geq 1^{\text{st}}$ date $< 1^{\text{st}}$ date $> 1^{\text{st}}$

Question 5

You can solving the following simple inequalities as if they are equations with an equals sign in the place of the inequality symbol.

Be sure to have an inequality sign in your answer.

(i) $4x \geq 24$

(ii) $x + 5 < 27$

(iii) $x - 8 \leq 17$

(iv) $5x + 11 > 26$

(v) $6x + 8 \geq 32$

(vi) $4x - 14 < 18$

(vii) $20 + 3x > 53$

(viii) $3 (x + 6) > 21$

(ix) $2 (3x + 5) \geq 22$

(x) $15x \leq 105$

(xi) $25x + 10 \leq 85$

(xii) $12x > 144$