

KS3 – Inequalities

Section A – Solving Inequalities

Q1 (4 marks)

Solve each inequality.

a) $x + 5 < 12$

b) $y - 4 > 3$

c) $a + 9 \leq 15$

d) $p - 7 \geq 2$

Q2 (4 marks)

Solve each inequality.

a) $3x < 18$

b) $5y > 20$

c) $4a \leq 28$

d) $6p \geq 42$

Q3 (4 marks)

Solve each inequality.

a) $x \div 4 < 3$

b) $y \div 5 > 2$

c) $a + 3 \leq 7$

d) $p \div 6 \geq 4$

Q4 (3 marks)

Solve each inequality.

a) $2x + 3 < 11$

b) $3y - 5 > 10$

c) $4a + 7 \leq 27$

Q5 (3 marks)

Solve each inequality.

a) $5x - 8 \geq 17$

b) $6y + 4 < 34$

c) $7a - 3 \leq 25$

Q6 (3 marks)

Solve each inequality.

a) $-2x < 10$

b) $-4y \geq 12$

c) $-5a \leq 20$

Q7 (3 marks)

Solve each inequality.

a) $3 - 2x > 9$

b) $5 - 3y \leq 14$

c) $7 - 4a \geq -5$

Challenge

Q8 (3 marks)

Solve each inequality.

a) $3x + 5 < x + 13$

b) $5y - 4 \geq 2y + 8$

c) $7a + 2 > 4a + 17$

Section B – Number Line Representation

Q9 (3 marks)

Draw a number line to represent each inequality.

a) $x > 3$

b) $x \leq -2$

c) $x \geq 5$

Q10 (3 marks)

Draw a number line to represent each inequality.

a) $x < -4$

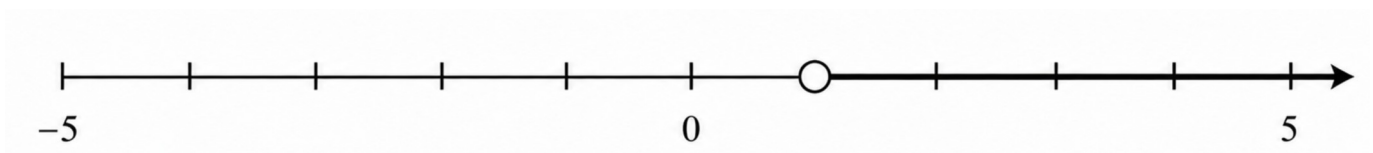
b) $-1 \leq x$

c) $2 > x$

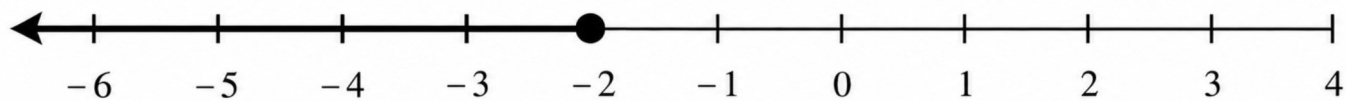
Q11 (3 marks)

Write the inequality represented by each number line.

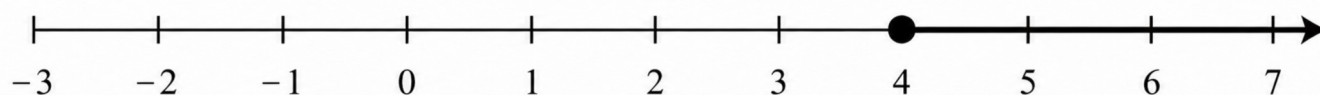
a)



b)



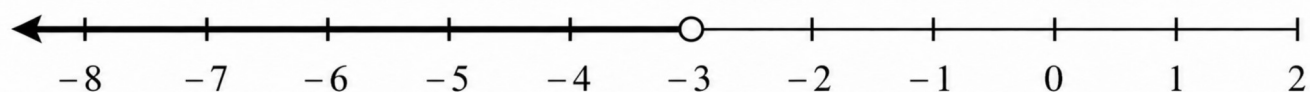
c)



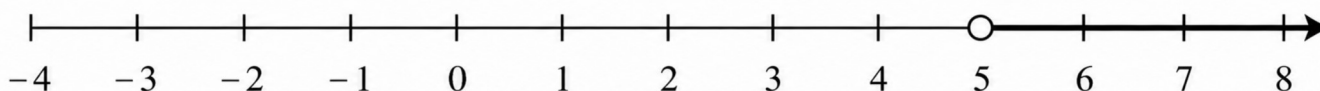
Q12 (3 marks)

Write the inequality represented by each number line.

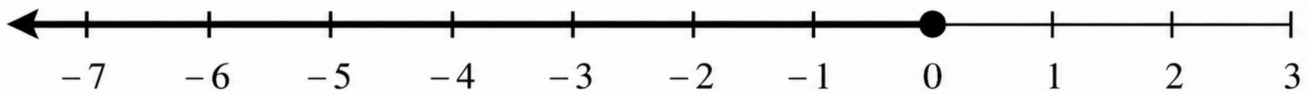
a)



b)



c)



Q13 (3 marks)

Solve each inequality, then draw your answer on a number line.

a) $2x + 1 < 9$

b) $3x - 4 \geq 8$

c) $5x + 2 \leq 17$

Q14 (3 marks)

Solve each inequality, then draw your answer on a number line.

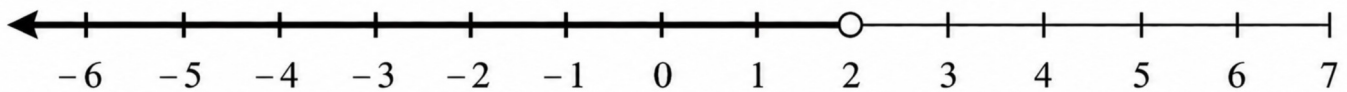
a) $4x - 3 > 9$

b) $-2x \leq 8$

c) $7 - 3x < 16$

Challenge

Q15 (4 marks)

A number line represents all values of x that satisfy an inequality.

a) Write down the inequality represented by the number line.

b) Write down the greatest integer that satisfies the inequality.

c) Does $x = 2$ satisfy the inequality? Give a reason.

Total: ____ / 49

Percentage: ____%