KS3 – Inequalities – Answers

Section A – Solving Inequalities

Q1
a) $x < 7$
b) $y > 7$
c) $a \leq 6$
d) $\rho \geq 9$

Q2
a) $x < 6$
b) $y > 4$
c) $a \leq 7$
d) $\rho \geq 7$

Q3
a) $x < 12$
b) $y > 10$
c) $a \leq 21$
d) $\rho \geq 24$

Q4
a) $x < 4$
b) $y > 5$
c) $a \leq 5$

Q5
a) $x \geq 5$
b) $y < 5$
c) $a \leq 4$

Q6
a) $x > -5$
b) $y \leq -3$
c) $a \geq -4$

Q7

a) $x < -3$
b) $y \geq -3$
c) $a \leq 3$

Q8
a) $x < 4$
b) $y \geq 4$
c) $a > 5$

Section B – Number Line Representation

Q9
a) Open circle at 3; arrow to the right.
b) Filled circle at −2; arrow to the left.
c) Filled circle at 5; arrow to the right.

Q10
a) Open circle at −4; arrow to the left.
b) Filled circle at −1; arrow to the right.
c) Open circle at 2; arrow to the left.

Q11
a) $x > 1$
b) $x \leq -2$
c) $x \geq 4$

Q12
a) $x < -3$
b) $x > 5$
c) $x \leq 0$

Q13
a) $x < 4$
b) $x \geq 4$
c) $x \leq 3$

Q14
a) $x > 3$
b) $x \geq -4$
c) $x > -3$

Q15
a) $x < 2$
b) 1
c) No. The circle at 2 is open, so 2 is not included.