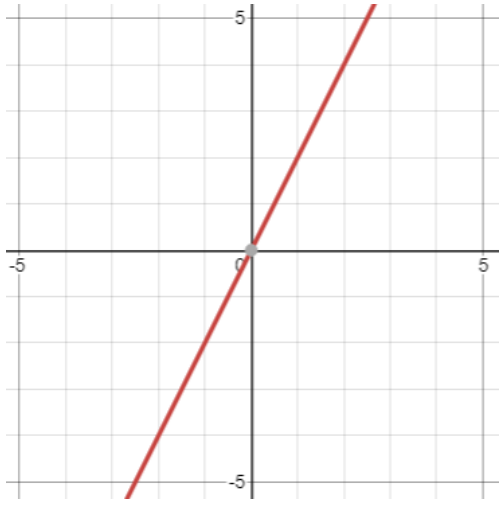
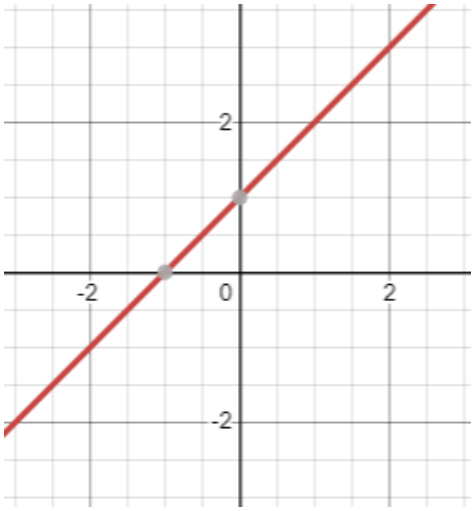
REGIONS AND INEQUALITIES

Shade the region represented by each inequality.

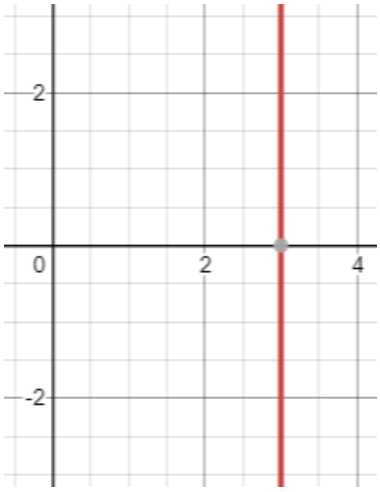
1 $y > 2x$



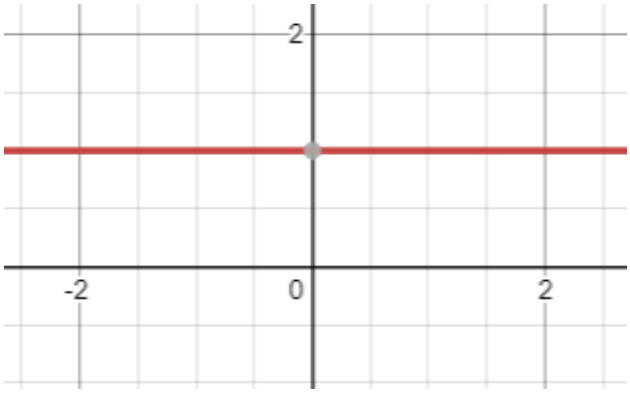
2 $y < x + 1$



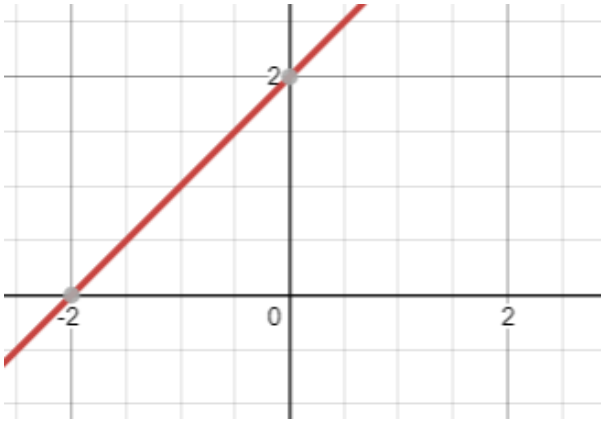
3 $x \leq 3$



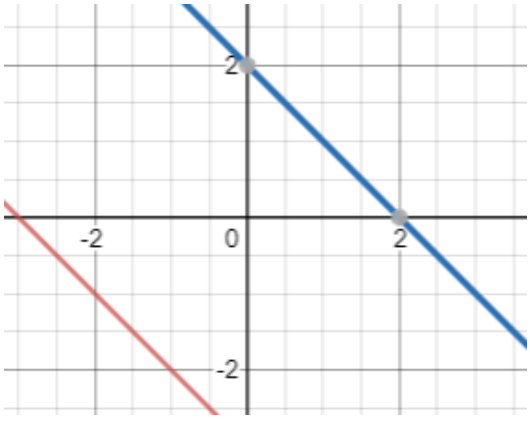
4 $y \geq 1$



5 $y \leq x + 2$

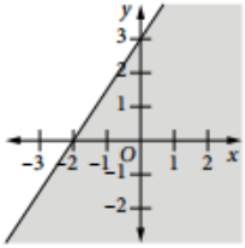


15 $-3 < x + y < 2$



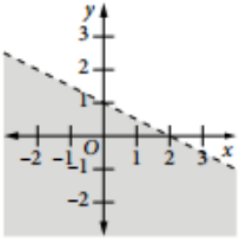
REGIONS AND INEQUALITIES

17 Which inequality defines the shaded region?



A $3x - 2y + 6 \geq 0$
B $3x - 2y + 6 \leq 0$
C $3x + 2y - 6 \geq 0$
D $3x + 2y - 6 \leq 0$

20 For this graph, indicate whether each statement is correct or incorrect.



(a) The equation of the boundary is $x + 2y - 2 = 0$.
(b) The gradient of the boundary line is $\frac{1}{2}$.
(c) The inequality for the region is $x + 2y - 2 > 0$.
(d) The inequality for the region is $x + 2y - 2 < 0$.

21 **(a)** Sketch the region defined by the intersection $y \geq x^2 - 1$ and $y \leq 3 - 3x$.
(b) Hence write the solution to $x^2 + 3x - 4 \leq 0$.