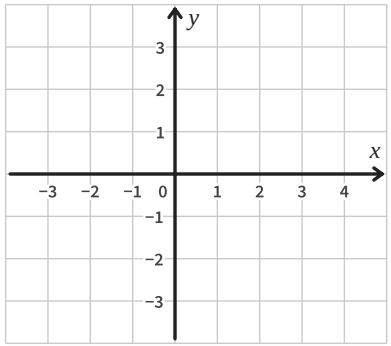
Inequalities and regions: shading a region

1

Shade the region R where $x < 2$ and $y \geq -1$.

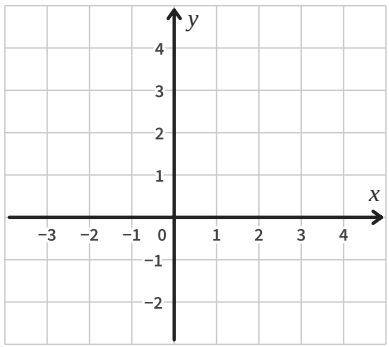


$x = 2$ dashed, $y = -1$ solid

$0 < 2$ true, $0 \geq -1$ true

2

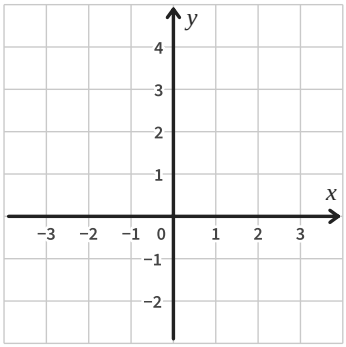
Shade the region R where $y \leq 3$ and $y > x - 1$.



$y = 3$ solid, $y = x - 1$ dashed

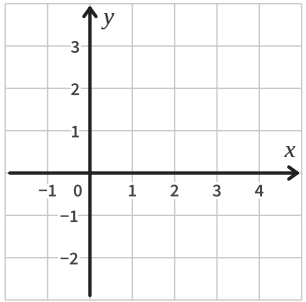
3

Shade the region R where $x \geq -2$ and $x + y < 2$.



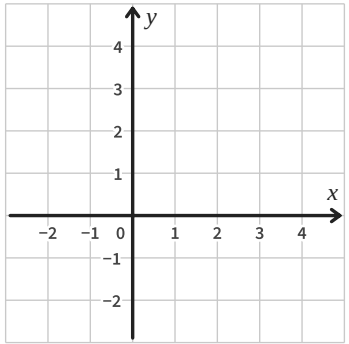
4

Shade the region R where $x > 0$, $x \leq 3$, $y \geq -1$ and $y < 2$.



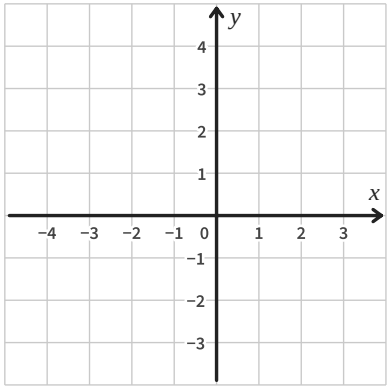
5

Shade the region R where $x + y \geq 2$, $y < 3$ and $x \leq 3$.



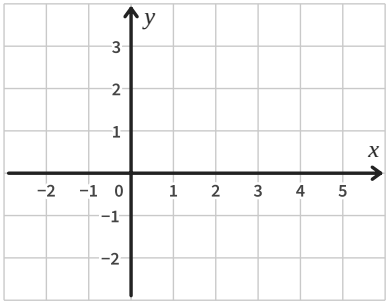
6

Shade the region R where $y > -2$, $x < 2$ and $y \leq x + 1$.



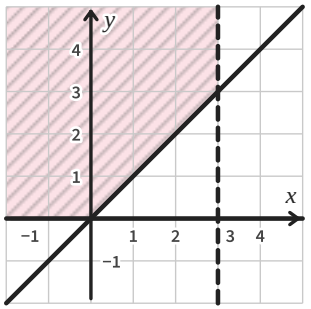
7

Shade the region R where $y \geq -1$, $y < x$ and $x + y \leq 3$.



8

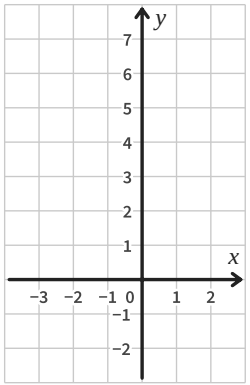
Zara shades R where $y \geq 0$, $x < 3$ and $y \leq x$. Which inequality has she shaded the wrong side of? Explain.



Inequalities and regions: shading a region *further practice*

9

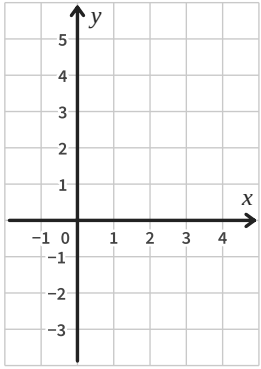
Shade the region R where $y > -2$, $x \leq 1$ and $y \leq 3x + 4$.



Answer _____

10

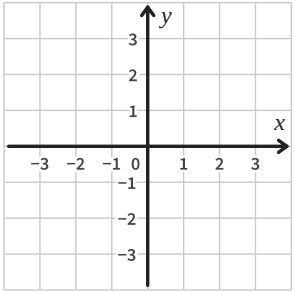
Shade the region R where $2x + y > 4$, $x \leq 3$ and $y \leq 4$.



Answer _____

11

Shade the region R where $y > x - 1$ and $y \leq x + 2$.



Answer _____

12

Is the point (2, −1) in the region where $y > x - 4$ and $2x + y \leq 3$?
Show how you know.

Answer _____

13

R is the region where $y \geq -2$, $y < x$ and $x + y < 3$. Which of these points are in R:
(0, −1), (2, 0), (3, 0), (1, 1)?

Answer _____

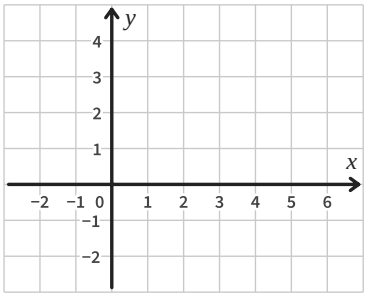
14

Is the point (−1, 3) in the region where $y \geq -2x + 1$ and $y < x + 5$?
Show how you know.

Answer _____

15

Shade the region R where $x \geq -1$, $y > -1$, $y \leq 3$ and $x + y < 4$.



Answer _____

16

Explain why there is no point in the region where $y > x + 2$ and $y < x - 1$.

Answer _____