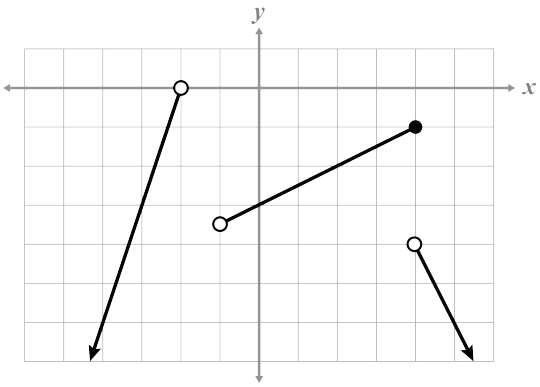
NAME:

Test 11 (Lessons 21–22): Piecewise Functions and Inequalities

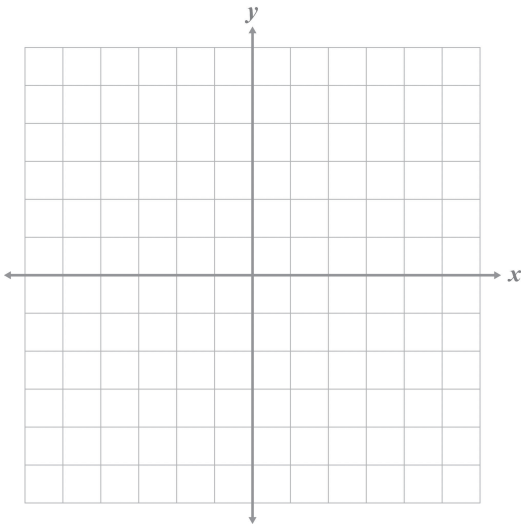
1) Write the piecewise function for the given graph.



2) Graph.

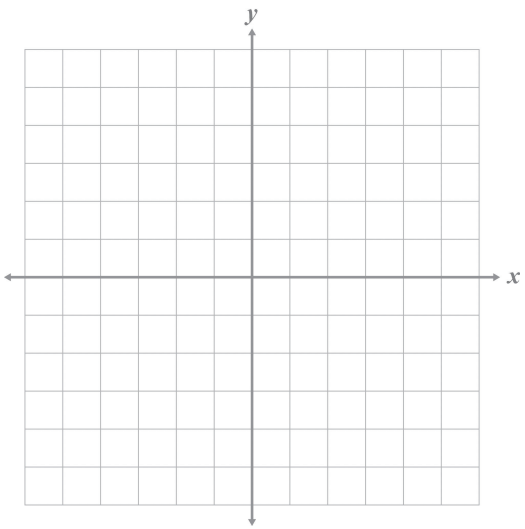
$y > |x + 5| - 3$

$y \geq -\sqrt{x + 4}$



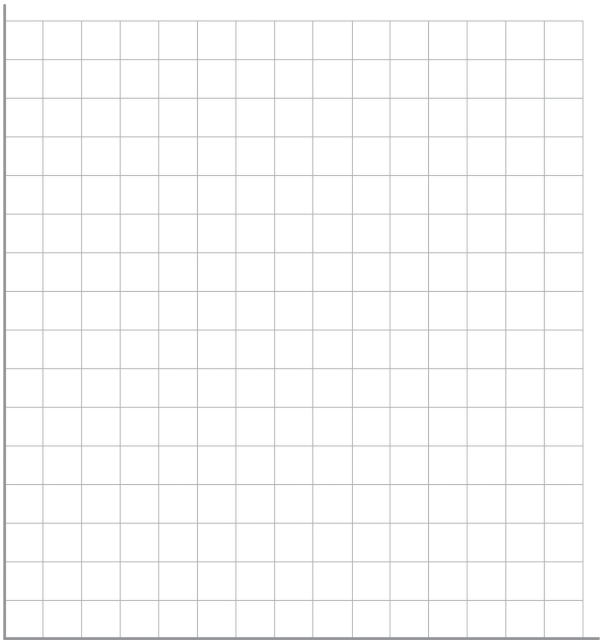
3) Graph.

$y = \lceil x \rceil + 2$



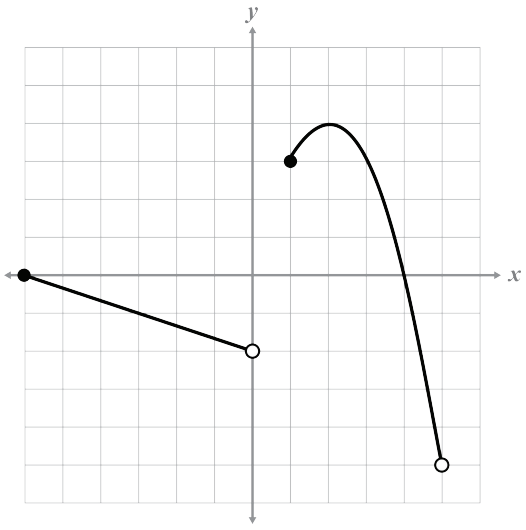
A Wildlife Sanctuary sells three types of day passes: child, student, and adult. The price of one child is \$20 (ages 0–10), one student is \$25 (ages 11–22), and one adult is \$25 (ages 23+).

4) Write a piecewise function for the types of day passes, $p(d)$.

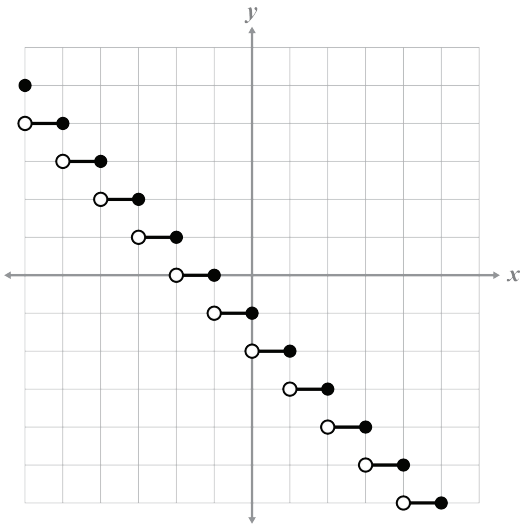


5) Graph the function.

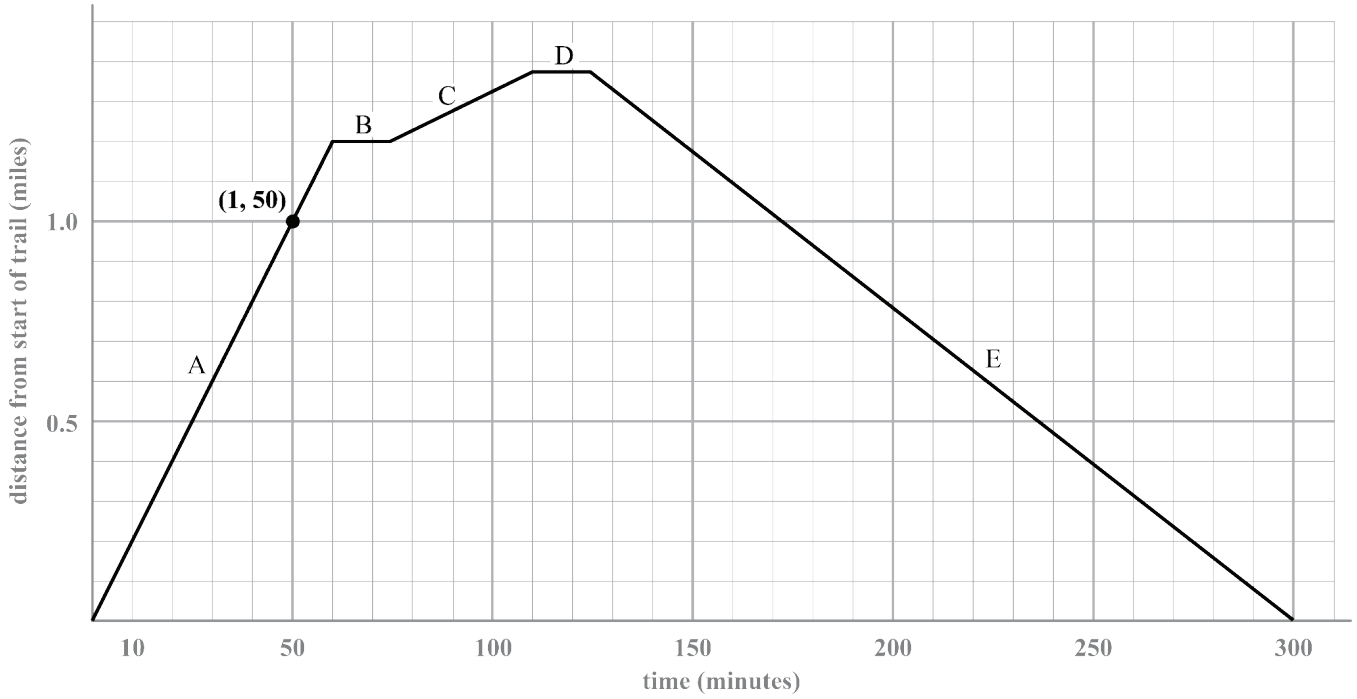
6) Write the domain intervals for the piecewise function.



7) Name the domain and range for the piecewise function.



A hiker's GPS tracker recorded the distance the hiker was from the start/end of a loop-trail. The GPS recorded five sections, labeled A–E on the graph.



8) What is the rate of change for the first 60 minutes of the hike?

9) How long did the hike take?

10) Explain what a slope of zero means in sections B and D of the hike.

11) What type of slope is section E of the hike? What does this mean in context?

12) Write the inequality for the given graph.