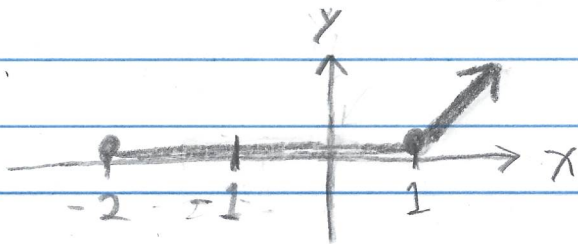


Exercise 1, 2, 49 Consider the graph.

What are the intercepts and symmetries.



Solution

The y -intercept is the point(s) where the graph intersects or touches the y -axis. So the y -intercept is the point $(0, 0)$.

The x -intercept(s) are the points where the graph intersects or touches the x -axis. So the x -intercepts are $(x, 0)$ where $x \in [-2, 1]$.

The graph is not symmetric with respect to the x -axis since there are points in the first quadrant (those on the ray) for which there are no corresponding points in the fourth quadrant (in fact there are no points on the graph in the fourth quadrant).

(CONTINUED) →

1.2.49
continued

The graph is not symmetric with respect to the y -axis since the point $(-2, 0)$ is on the graph but the point (that results from replacing $x = -2$ with $x = -(-2) = 2$) $(+2, 0)$ is not on the graph.

The graph is not symmetric with respect to the origin since there are points in the first quadrant (those on the ray) for which there are no corresponding points in the third quadrant (in fact there are no points on the graph in the third quadrant). \square