



1. What is the y-intercept for the graph of the larger bin and what does it mean in the context of the problem?

$V\text{-int} = 45 \text{ m}^3$  The larger bin starts with a volume of  $45 \text{ m}^3$ .

2. What is the x-intercept for the graph of the smaller bin and what does it mean in the context of the problem?

$t\text{-int} = 60 \text{ min}$  The smaller bin takes 60 min to empty.

3. Which bin emptied the fastest? The larger bin.

4. What is the domain of the larger bin in words and in set notation?

D: All real #'s greater than or equal to 0 and less than or equal to 45.

$$\{t \mid 0 \leq t \leq 45, t \in \mathbb{R}\}$$

5. What is the range of the smaller bin in words and in interval notation?

R: All real #'s greater than or equal to 0 and less than or equal to 30.

$$[0, 30]$$