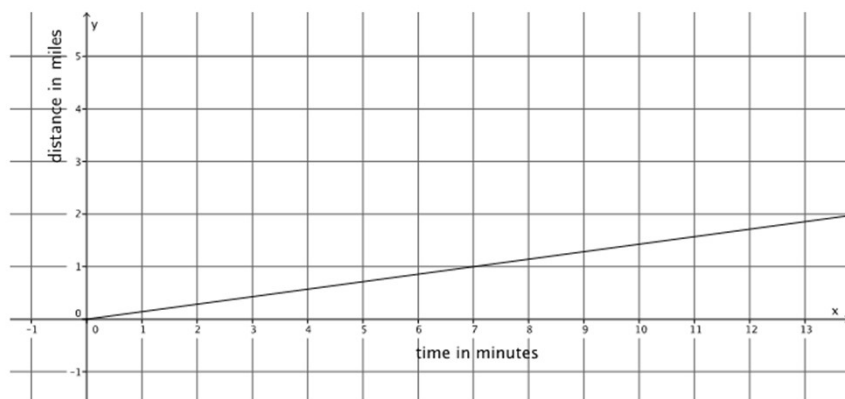


## Constant Rate and Linear Equation

1. a) Bianca can run 5 miles in 41 minutes. Assuming she runs at a constant rate, write the linear equation that represents the situation.

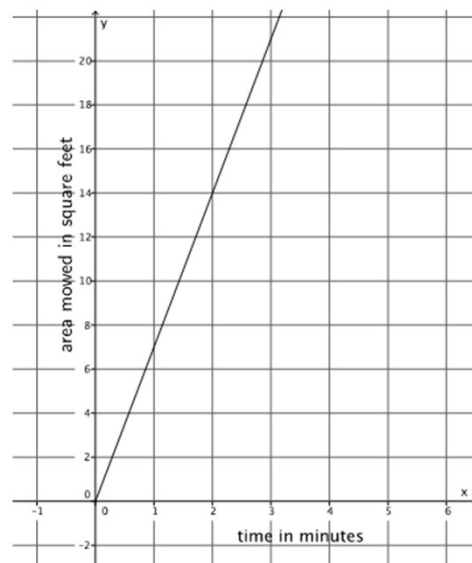
b) The figure below represents Cynthia's constant rate of running.



Who runs faster? Explain.

2. a) Geoff can mow an entire lawn of 450 square feet in 30 minutes. Assuming he mows at a constant rate, write the linear equation that represents the situation.

b) The figure represents Mark's constant rate of mowing a lawn. Who mows faster? Explain.



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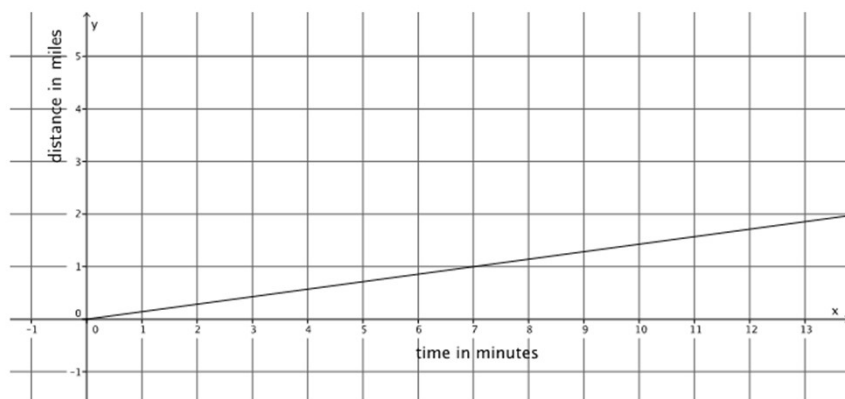
## Constant Rate and Linear Equation

1. a) Bianca can run 5 miles in 41 minutes. Assuming she runs at a constant rate, write the linear equation that represents the situation.

*Let  $y$  represent the total number of miles Bianca can run in  $x$  minutes.*

*We can write  $\frac{y}{x} = \frac{5}{41}$ , and  $y = \frac{5}{41}x$ .*

- b) The figure below represents Cynthia's constant rate of running.



Who runs faster? Explain.

*Cynthia runs faster. The slope of the graph for Cynthia is  $\frac{1}{7}$ , and the slope or rate for Nicole is  $\frac{5}{41}$ . When you compare the slopes, you see that  $\frac{1}{7} > \frac{5}{41}$ .*

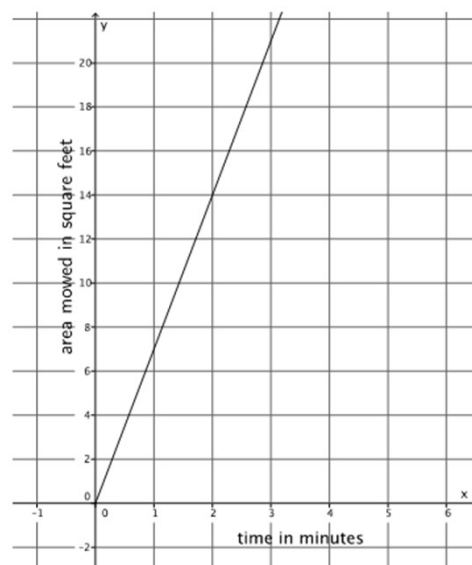
2. a) Geoff can mow an entire lawn of 450 square feet in 30 minutes. Assuming he mows at a constant rate, write the linear equation that represents the situation.

*Let  $y$  represent the total number of square feet Geoff can mow in  $x$  minutes.*

*We can write  $\frac{y}{x} = \frac{450}{30}$ , and  $y = 15x$ .*

- b) The figure represents Mark's constant rate of mowing a lawn. Who mows faster? Explain.

*Geoff mows faster. The slope of the graph for Mark is  $\frac{14}{2} = 7$ , and the slope or rate for Geoff is  $\frac{450}{30} = 15$ . When you compare the slopes, you see that  $15 > 7$ .*



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