## Possible Solutions
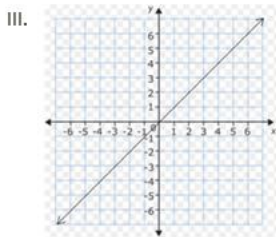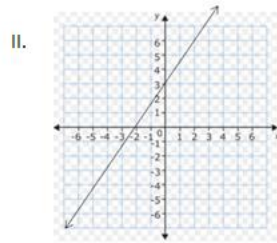
Which of the following represents a proportional relationship?

I.

| # of Hours | Cost of Service Call |
|---|---|
| 2 | 100 |
| 3 | 125 |
| 5 | 175 |
| 8 | 250 |

II.



III.



IV.  $y = \dfrac{3}{4x}$

a) I and II

b) I and IV

c) III and IV

d) II and III


## Possible Solution

A linear equation is proportional if there is a constant rate of change. From a graph, the line must go through (0, 0). From a table, $\frac{y}{x}$ must be constant for each $y$ and $x$. From an equation, the equation must be in the form $y = kx$.

- The ratio for the table in I is not constant.
- The graph for II does not go through (0, 0).
- The graph of III goes through (0, 0), so it is proportional.
- The equation $y = \dfrac{3}{4x}$ is in the correct form, so it is proportional.
- The solution is c) III and IV.