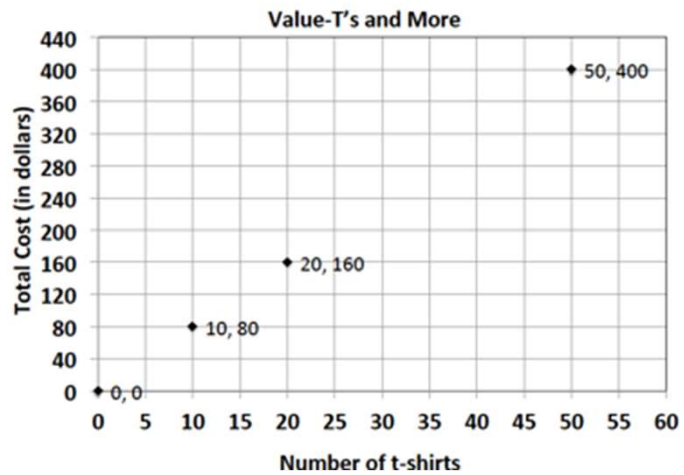


Proportion Worksheets (Equations)

1. Allison's middle school team has designed t-shirts containing their team name and color. Allison and her friend Nicole have volunteered to call local stores to get an estimate on the total cost of purchasing t-shirts. Print-o-Rama charges a set-up fee, as well as a fixed amount for each shirt ordered. The total cost is shown below for the given number of shirts. Value T's and More charges \$8 per shirt. Which company should they use?

Number of Shirts (S)	Total Cost (C)
10	95
25	
50	375
75	
100	

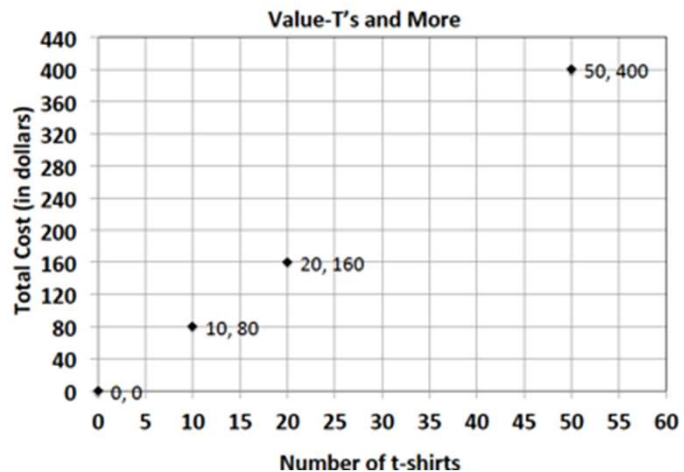


- a) Does either pricing model represent a proportional relationship between the quantity of t-shirts and the total cost? Explain.
- b) Write an equation relating cost and shirts for Value T's and More.
- c) What is the constant of proportionality of Value T's and More? What does it represent?
- d) How much is Print-o-Rama's set-up fee?
- e) If you need to purchase 90 shirts, write a proposal to your teacher indicating which company the team should use. Be sure to support your choice. Determine the number of shirts that you need for your team.

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a) Does either pricing model represent a proportional relationship between the quantity of t-shirts and the total cost? Explain.

The unit rate of $\frac{y}{x}$ for Print-o-Rama is not constant. The graph for Value T’s and More is proportional since the ratios are equivalent (8) and the graph shows a line through the origin.

b) Write an equation relating cost and shirts for Value T’s and More.

$$C = 8S \text{ for Value T's and More}$$

c) What is the constant of proportionality of Value T’s and More? What does it represent?

8; the cost of one shirt is \$8.

d) How much is Print-o-Rama’s set-up fee?

The set-up fee is \$25.

e) If you need to purchase 90 shirts, write a proposal to your teacher indicating which company the team should use. Be sure to support your choice. Determine the number of shirts that you need for your team.

Since we plan on a purchase of 90 shirts, we should choose Print-o-Rama.

Print-o-Rama: $C = 7S + 25$; $C = 7(90) + 25$; $C = 655$

Value T’s and More: $C = 8S$; $C = 8(90)$; $C = 720$