

## 7-3 TASKS T-SHIRTS

(The *MathLinks* Rubric) See Activity Routines in the Teacher Portal for directions.

7.RP.A; SMP1,2,3,4,6,7,8

A company makes custom t-shirts in four sizes: S, M, L, and XL.

The following table shows a breakdown of the costs to make one t-shirt for each size.

1. Calculate the total cost for each shirt size.

Size	Amount of Fabric (in yards)	Cost of Fabric (per yard)	Cost of Labor	Total Cost for each shirt
S	2.5	\$2	\$3	\$8
M	3	\$2	\$3	\$9
L	3.5	\$2	\$3	\$10
XL	4	\$2	\$3	\$11

2. Make a graph of the data showing the amount of fabric on the x-axis and the total cost for each shirt on the y-axis. Label and scale the graph appropriately.

3. Does the relationship appear to be proportional? Explain.

No. Entries in the table are not constant multiples of one another. The graph is a straight line but not going through the origin.

4. If you were to draw a “trend line” through the points, where would that line cross the y-axis? What might this value represent in the context of the problem?

At 3, which is the pint (0, 3), which means that when there is 0 yards of fabric, the cost of the shirt is \$3. In actuality, this mans that before a shirt is even made, the labor cost will always be \$3.

5. What is the increase in cost per 1 yard of fabric? How is this value represented in your graph?

There is an increase in cost of \$2 per 1 yard of fabric. For the graph, there is a vertical increase of \$2 for every horizontal increase of 1 yard.

