

MathFLIX CHALLENGE

Word Problem Solutions

Loyola University can't decide how many t-shirts to buy. Help them build a table to calculate the total cost and the cost per student.

The t-shirt company will make all the shirts using a single pattern. The cost of making the pattern is \$50. The cost to have each shirt printed is \$6.

| Number of Students | Total Cost = $50 + 6 \times \text{Number of Students}$ | What each student pays = Total Cost/Number of Students = $(30 + 6 \times \# \text{ of Students}) / \# \text{ of Students}$ |
|--------------------|---|--|
| 5 | $50 + (6 \times 5)$ $50 + 30 = 60$ | $\frac{50 + (6 \times 5)}{5} = \frac{80}{5} = 16$ |
| 10 | | |
| 15 | | |
| 20 | | |
| 25 | | |

In addition, the t-shirt company will only charge \$4 per t-shirt if Loyola buys 30 or more t-shirts. Adjust the formulas above to figure out the cost of buying 30 shirts, 40 shirts and 50 shirts.

Part 2

The library at your school just received a new shipment of books. In order to make room for the new books the old books are being put in 2 types of boxes for storage. A small box can hold 5 books and a big box can hold 10 books. If we have 8 small boxes and 6 big boxes, how many books can we put in storage?



T = Total books
S = # of small boxes
B = # of big boxes

$$T = (5 \times S) + (10 \times B)$$
