

2

Example

The school is planning a field trip to Great America. There are two different bus companies that the school can use. If they go with the district transportation, they have to pay \$100.00 for the driver's fees, plus an additional \$2 for each student. If they go with a Via bus, they have to pay an initial fee of \$40.00 plus an additional fee of \$4.00 per student.

$s = \# \text{ of student}$

- a) Which would be a better company if they want to take 25 students? Via Bus
- b) Which would be a better company if they want to take 30 students? both/same
- c) Which would be a better company if they want to take 50 students? Dist. Trans.

Dist Tran $\rightarrow 100 + 2s$

Via Bus $\rightarrow 40 + 4s$

a) $s = 25$
 $100 + 2(25) = \$150.00$

a) $40 + 4(25) = \$140.00$

b) $100 + 2(30) = \$160$

b) $40 + 4(30) = \$160.00$

c) $100 + 2(50) = \$200$

c) $40 + 4(50) = \$240.00$

3

Example

Subway and Quiznos have promotions going on. They are both selling membership cards that allow you to buy foot longs at a discount for an entire month. Subway sells their membership card for \$10 dollars. With the membership card you can then buy foot longs for \$3.00. Quiznos sells their membership card for \$5.00, but the foot longs are \$4.00.

- a) How much would you pay with each if you only bought 3 foot longs during the month?
- b) How much would you pay with each company if you only purchased 8 foot longs during the month?
- c) How many foot longs would you have to buy for both to come out to the same price.
- d) Which company would be best for you? Explain why.

$f = \# \text{ of footlongs}$

Subway $\rightarrow 10 + 3f$

Quiznos $\rightarrow 5 + 4f$

f=3
a) $10 + 3(3) = \$19.00$

a) $5 + 4(3) = \$17.00$

f=8
b) $10 + 3(8) = \$34.00$

b) $5 + 4(8) = \$37.00$

c) Subway = Quiznos

$$\begin{array}{r}
 10 + 3f = 5 + 4f \\
 -5 \quad -3f \quad +5 \quad -3f \\
 \hline
 5 = f
 \end{array}$$