

Bell Work

4/7/2015

Find the slope and y-intercept:

$$\begin{array}{r} -12x + 4y = 32 \\ +12x \qquad \qquad +12x \end{array}$$

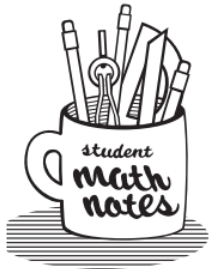
$$\frac{4y}{4} = \frac{12x + 32}{4}$$

$$y = \frac{12}{4}x + \frac{32}{4}$$

Slope: 3

y-int: 8

$$y = 3x + 8$$




National Council of Teachers of Mathematics

May/June 2009

## Big Apple or Bust!

A group of students from Wamsutta Middle School is planning a trip to New York City. Their student council is investigating bus companies that offer special group plans. Two advertisements appear below.

*Daily trips to NYC*  
at 6 a.m. and 10 a.m.




**APPLE CHARTER**  
Bus Company

- \$400 booking fee
- \$10 per student

**CITY CHARTER Bus Line**

- ★ Low \$200 booking fee
- ★ \$15 per student
- ★ Travel at 7 a.m. or NOON daily!



Travel to  
**NYC!**

Needs to be completed by tomorrow

*Daily trips to NYC*  
at 6 a.m. and 10 a.m.

## APPLE CHARTER

*Bus Company*

- \$400 booking fee
- \$10 per student

## CITY CHARTER Bus Line

- ★ Low \$200 booking fee
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Travel to  
**NYC!**

1. Which bus company plan do you think is the better deal? Explain why you think so.

2. Complete the table below.

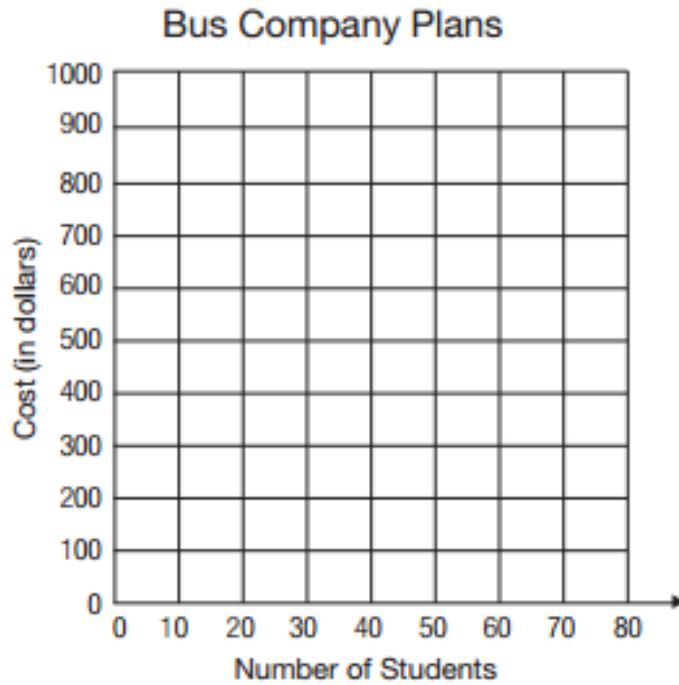
**Cost Comparison**

Number of Students	Apple Charter	City Charter
5		
15		
25		
35		
45		



3. Now use the table to describe which bus company you think is the better deal, and compare it to your answer in question 1.

4. On the grid in the next column, use two different colors to graph the cost of 5, 15, 25, 35, and 45 students. Use one color to represent the Apple Charter Bus Company and another color for the City Charter Bus Line to NY City.



5. Describe in words how to find the cost of using Apple Charter Bus Company with any number of students:

The cost will equal \_\_\_\_\_ plus \_\_\_\_\_

\_\_\_\_\_

6. Use variables and numbers to write an equation that describes the cost of using Apple Charter Bus Company with any number of students. Let  $C$  represent the cost and  $s$  the number of students:

$C =$  \_\_\_\_\_

7. Use the same procedure that you followed in questions 5 and 6 to write an equation that describes the cost of using City Charter Bus Line with any number of students. Let  $C$  represent the cost and  $s$  the number of students.

$C =$  \_\_\_\_\_

8. Use the equations that you wrote to find the cost for transporting 23 students with each bus company.

9. Use the equations that you wrote to find the cost of 68 students with each bus company.

10. What do the answers to questions 8 and 9 tell you about which bus company has the better deal?



11.) 42 students

12.) Graph - more accurate

Table - rough estimate

13.) 43 students

14.) 40 students

\$800

Intersection  
point

15.)

16.) Apple: 41 or more students

City: 1 → 39 students.

