**Name: \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ Class: \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_**

**M8-U5: Lesson #9 – Unit 5 Systems of Equations Task**

**1.** Ralph and Jody go to the shop to buy potato chips and candy bars.

Ralph buys 3 bags of potato chips and 4 candy bars. He spends $3.75.

Jody buys 4 bags of potato chips and 2 candy bars. She spends $3.00.

Later Clancy joins Ralph and Jody and asks to buy one bag of potato chips and one candy bar from them. They need to work out how much he should pay.

Ralph writes **3*p* + 4*b* = 375**

**a)** If ***p*** stands for the cost, in cents, of a bag of potato chips and ***b*** stands for the cost, in cents, of a candy bar, what does the 375 in Ralph’s equation mean?

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**b)** Write a similar equation, using ***p*** and ***b***, for the items Jody bought.

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**c)** Use the two equations to figure out the price of a bag of potato chips and the price of a candy bar. Show your work.

potato chips\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

candy bar \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

**d)** Clancy has just $1. Does he have enough money to buy a bag of potato chips and a candy bar? *Explain.*

**2.** Two taxi companies charge different rates.

 **Metro Taxi:** $3.00 for the first mile and $2.50 for each additional mile

 **City Taxi:** $5.00 for the first mile and $2.25 for each additional mile

 **a)** When will the two taxi companies cost the same?

**b)** Describe a situation in which it would make more sense to use Metro Taxi. Then describe a different situation in which it would make more sense to use City Taxi. *Explain.*

**3.** Bill wants to order new jerseys for his baseball team. He sees the following advertisements for two printing companies, ‘PRINT IT’ and ‘TOP PRINT’.

 **a)** Give Bill some advice on which company he should buy from. Explain:

When should he choose “PRINT IT”? When should he choose “TOP PRINT”?

**b)** A third company called “VALUE PRINTING” wants its prices to be between those of “PRINT IT” & “TOP PRINT”. The company never wants to be the cheapest nor the most expensive. Complete the poster for the new company. *Show work*.

