

Name Student I

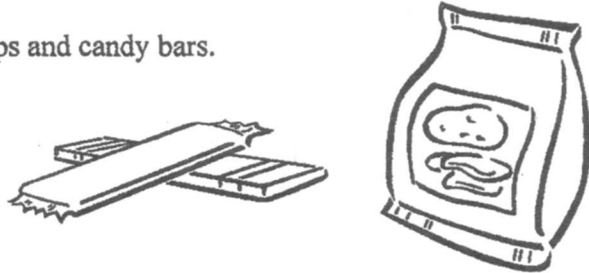
## Buying Chips and Candy

Grade 9

This problem gives you the chance to:

- form and solve a pair of linear equations in a practical situation

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

$$3p + 4b = 375$$

1. 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?

The total cost of both, the bags of potato chips and the candy bars, in cents.

+1

2. Write a similar equation, using  $p$  and  $b$ , for the items Jody bought.

$$4p + 2b = 300$$

+2

Name Student I

**Buying Chips and Candy, continued**

**Grade 9**

3. Use the two equations to figure out the price of a bag of potato chips and the price of a candy bar.

potato chips 45¢  
 candy bar 60¢

(+1)

Show your work.

$$7p + 6b = 675$$

30    50

$$7p = \frac{675}{7} - \frac{6b}{7}$$

$$6b = \frac{675}{6} - \frac{7p}{6}$$

(no pts)

(45, 60)

36, 35

<sup>90</sup>  
315, 60

$\frac{240}{6} = 135$

4. Clancy has just \$1. Does he have enough money to buy a bag of potato chips and a candy bar?

NO

Explain your answer by showing your calculation.

(+1)

60 + 45 = \$1.05; that is more than a  
dollar.

Name Student F

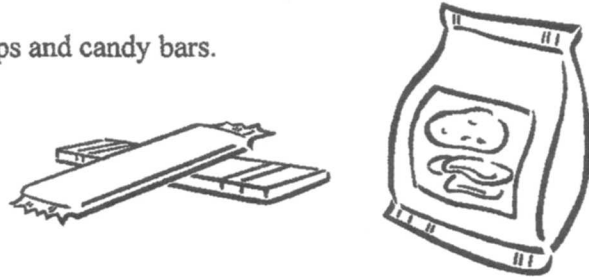
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Ralph writes

$$3p + 4b = 375$$

1. 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?

375 is the number of cents needed to pay

+1

2. Write a similar equation, using  $p$  and  $b$ , for the items Jody bought.

$4p + 2b = 300$

+2

Name Student F

**Buying Chips and Candy, continued**

**Grade 9**

3. Use the two equations to figure out the price of a bag of potato chips and the price of a candy bar.

potato chips 65  
 candy bar ~~30~~ 45

Show your work.

Handwritten work for problem 3:

$$\begin{array}{r} 265 \\ \times 4 \\ \hline 260 \end{array}$$

$$\begin{array}{r} 180 \\ + 180 \\ \hline 360 \end{array}$$

$$\begin{array}{r} 260 \\ + 115 \\ \hline 375 \end{array}$$

$$3p + 46 = 375$$

$$\begin{array}{r} 2600 \\ 280160 \\ \hline 280165 \end{array}$$

$$\begin{array}{r} 8 \\ 1178 \\ - 18 \\ \hline 25 \end{array}$$

$$\begin{array}{r} 265 \\ \times 4 \\ \hline 260 \end{array}$$

$$\begin{array}{r} 355 \\ + 6 \\ \hline 330 \end{array}$$

$$4p + 26 = 300 \quad (1)$$

$$\begin{array}{r} 265 \\ 4 \\ \hline 220 \\ 90 \\ \hline 210 \end{array}$$

4. Clancy has just \$1. Does he have enough money to buy a bag of potato chips and a candy bar?

NO

Explain your answer by showing your calculation.

65 + 45 = 110

HI  
FT