

Solving Word Problems - Cost Equations

1) The cost to rent a banquet hall for a wedding is represented by the equation,  $C = 25p + 150$ .  $C$  represents the total cost, while " $p$ " represents the number of people attending the wedding.

- A) Determine the cost if 120 people attend the wedding?
- B) How many people can attend the wedding if the total cost cannot exceed \$2800 ?

**Solution**

1)  $C = 25p + 150$

$C = 25(120) + 150$

$C = 3000 + 150$

$C = 3150$

The total cost for 120 to attend the wedding would be \$3150.

1B)  $C = 25p + 150$

$2800 = 25p + 150$  or

$25p + 150 = 2800$

$25p + 150 - 150 = 2800 - 150$

$25p = 2650$

$\frac{25p}{25} = \frac{2650}{25}$

$p = 106$

106 people can attend the wedding for \$2800.

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Solving Word Problems - Cost Equations

1) Pizza Plus charges \$ 6.75 for a basic pizza and a additional \$0.75 for each topping added.

- A) Write an equation to represent the total cost of the pizza?
- B) Use the equation to determine the total cost of a pizza with 5 toppings.
- C) Use your equation to determine how many three topping pizzas could you buy for \$ 44.00.

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2) Bell charges a fixed monthly charge of \$ 25 for a cell phone plus an additional \$0.10 per minute of use.

- A) Write an equation to represent this relationship.
- B) Determine how many minute of use you could have for a total monthly cost \$ 60 ?
- C) What would your bill monthly cost if you used 250 minutes?

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Campbell works for a cable company. He earns \$9.10 per hour, plus \$12.00 for each upgraded contract he sells.

- a) Last week Campbell worked 12 h and sold 5 contract upgrades. How much did he earn last week?
- b) On March Break, Campbell is scheduled to work 40 h. He hopes to earn \$640. How many upgrades does he need to sell?

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