

## Percent Practice

1. When selling a house, a real-estate agent earns 5% commission. Calculate the commission earned on the sale of a \$375 900 condo.
2. A \$28.59 pair of gloves is on sale for 35% off. What is the sale price of the gloves, including tax?
3. Parveen has dinner at a restaurant and his bill comes to \$56.33. He would like to leave a 20% tip as well. If he gives the waitress four \$20 bills, how much change should she give him back?
4. Adi wants to buy a new laptop. *Electronic City* sells the computer for that costs \$549.99 and is having a 15% off sale. *Computer Central* sells the same computer for \$582.98 and is having a 20% off sale. Where should she buy the computer to get the best deal?

ANSWERS: 1] \$18795 2] \$21.00 3] \$12.40 4] *Computer Central is \$1.11 cheaper*

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Elizabeth works at a store. She earns a base salary of \$50 each day, plus 10% commission on all of her sales.

a) Complete the following table of values.

| Sales (\$) | Earnings (\$) |
|------------|---------------|
|            |               |
|            |               |
|            |               |
|            |               |
|            |               |
|            |               |

b) Determine the initial value.

c) Determine the rate of change.

d) By looking at the original question, how could you have determined the rate of change?

e) Write an equation for Elizabeth's earnings,  $E$ , where  $n$  is the number of sales she makes.

f) If she earned \$295, how much did she sell?

g) Kashmir earns \$250 each week, plus 20% commission on all his sales. Write an equation for his earnings.

h) Wanda earns 3% commission on each house that she sells. Write an equation for her earnings.

## Equation of a Graph with Percent

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Elizabeth works at a store and earns a base salary of \$50 each day, plus 10% commission on all of her sales.

a) Complete the following table.

| Sales (\$) | Earnings (\$) |
|------------|---------------|
| 0          | 50            |
| 100        | 60            |
| 200        | 70            |
| 300        | 80            |
| 400        | 90            |

+100 (      ) +10

$100 \times 10/100 = \$10$      $50 + 10$

$200 \times 10 \div 100 = 20$      $50 + 20$

$50 + 30$

$50 + 40$

b) Determine the initial value.

$$\$ 50^{00}$$

c) Determine the rate of change.

$$\begin{aligned} \text{ROC} &= \frac{\Delta E}{\Delta S} \\ &= \frac{10}{100} \\ &= 0.10 \end{aligned}$$

d) How do you think you could have come up with the rate of change just by looking at the original question?

Change 10% into a decimal ( $\div 100$ )

e) Write an equation for Elizabeth's earnings (E), where S is the amount of sales that she has made.

$$E = 50 + 0.10S$$

f) Predict how much she sold if she earns a total of \$295 for the day.

$$\begin{aligned} 295 &= 50 + 0.10S \\ 245 &= 0.10S \quad \div 0.10 \\ 2450 &= S \end{aligned}$$

∴ She sold \$2450 of merchandise

g) Write an equation for each person's earnings:

i) Kashmir earns \$250 each week, plus 20% commission.

$$E = 250 + 0.20S$$

ii) Wanda earns 6% commission on all of the houses that she sells.

$$E = 0.06S$$