

Math 9: Income Quiz

Full credit will only be awarded for all work shown in a neat and organized manner.

There are 52 weeks in a year

There are 12 months in a year

1. **Pick one** of the four ways that someone can be paid for their work (Wages, Salary, Piece of Work, Commission). **Explain one advantage** and **one disadvantage** of being paid in this way.

Salary: Advantage - very consistent pay
disadvantage - no extra pay for doing a better job

2. Susan works as a mechanic and gets paid \$37 per hour. One week she worked 55 hours, where 40 were regular hours, 8 were paid at time-and-a-half and the rest were paid at double-time. What was her gross income for the week?

$$\begin{aligned} \text{Gross} &= \text{regular} + \text{time and a half} + \text{double time} \\ &= \$37 \cdot 40 + 1.5 \cdot \$37 \cdot 8 + 2 \cdot \$37 \cdot 7 \\ &= \$1480 + \$444 + \$518 = \boxed{\$2442} \end{aligned}$$

3. Yuri works as an engineer and earns \$5,800 monthly salary. If Yuri is paid every 2 weeks, how much does he earn each paycheck?

$$\text{per year} \Rightarrow \$5,800 \cdot 12 = \$69,600$$

$$\text{per 2 weeks} \Rightarrow \frac{\$69,600}{26} = \boxed{\$2676.92}$$

4. Tim sells cars and earns commission based on his total sales for the month. He earns 1.5% commission on sales less than \$10,000 and 2.5% on sales more than \$10,000. How much commission does he earn in a month where he sells \$35,000 worth of cars?

$$\begin{aligned} \text{Commission} &= \text{less than } \$10,000 \oplus \text{over } \$10,000 \\ &= \$10,000 \cdot 0.015 + \$25,000 \cdot 0.025 \\ &= \$150 + \$625 = \boxed{\$775} \end{aligned}$$

5. Jun works in a cellphone factory and gets paid for each phone she puts together. Jun can assemble 72 iPhone X's in an 8-hour day. Jun is paid \$3.75 for each iPhone X she puts together.

a. How much does Jun earn for every hour of work

$$\text{per day} \Rightarrow 72 \cdot \$3.75 = \$270$$

$$\text{per hour} \Rightarrow \frac{\$270}{8} = \boxed{\$33.75}$$

b. Jun works 38 hours per week and is paid every 2 weeks. How much does she earn each paycheck?

$$\text{per week} \Rightarrow 38 \cdot \$33.75 = \$1282.50$$

$$\text{per 2 weeks} \Rightarrow \$1282.50 \cdot 2 = \boxed{\$2565}$$

6. Hamza works as a medical equipment salesperson. He earns an annual salary of \$51,750 and earns commission based on his sales. He earns 5.5% commission on sales over \$10,000.

a. Hamza is paid semi-monthly. How much does he earn from his salary during that time?

$$\text{Per year} \Rightarrow \$51,750$$

$$\text{per semi-month} \Rightarrow \frac{\$51,750}{24} = \boxed{\$2156.25}$$

b. During the same semi-monthly period, Hamza sells \$13,000 of medical equipment. What is his gross pay for the semi-monthly period?

$$\begin{aligned} \text{Commission} &= (\$13,000 - \$10,000) \cdot 5.5\% \\ &= \$3,000 \cdot 0.055 = \$165 \end{aligned}$$

$$\text{Gross income} = \text{Salary} + \text{Commission}$$

$$= \$2156.25 + \$165 = \boxed{\$2321.25}$$