1. Why do you think a company would choose to pay employees by commission?

To encourage them to work harder. The more they sell, the more they earn!

2. a) What other ways are employees paid, other than by commission?
   b) Describe advantages and disadvantages of each method of payment.

a) Salary → fixed amount
   Hourly → how much time you spend working

b) Salary → you know you get paid.
   no chance to earn more.
   Hourly → work more hours get more pay.
   don't get paid if you are sick.
3. Jake earns 25% commission selling ice cream. How much does he earn for each day’s sales?
   a) Friday $100  
   b) Saturday $180
   
   a) $100 \times 0.25 = $25
   b) $180 \times 0.25 = $45

4. A school earns 35% commission on its book orders. Estimate, then calculate, the commission earned on each month’s order.
   a) October $309  
   b) November $1850
   
   a) Estimate = $100
   Actual = 309 \times 0.35
   = $108.15
   b) Estimate = $620
   Actual = 1850 \times 0.35
   = $647.50

5. To raise funds, members of the drama club sell flower bulbs. They earn 30% commission. Estimate, then calculate how much each person earns for the club.

   a) Estimate = $36
   Actual = 125.00 \times 0.30
   = $37.50

   b) Estimate = $120
   Actual = 350.00 \times 0.30
   = $105

<table>
<thead>
<tr>
<th>Name</th>
<th>Total Bulb Sales</th>
</tr>
</thead>
<tbody>
<tr>
<td>Deanna</td>
<td>$125.00</td>
</tr>
<tr>
<td>Pierre</td>
<td>$350.00</td>
</tr>
</tbody>
</table>
6. Alana earns a 15% commission on bicycle sales. One week she earned $450. What were Alana’s total bicycle sales for that week?

Have to set up statements (equations) for 
\[ \text{Sales} \times \frac{\text{Commission}}{\text{Percentage}} = \text{Earnings} \]

\[
\frac{y \times 0.15}{0.15} = 450
\]

\[
y = \frac{450}{0.15} = 3000
\]

Total bike sales were $3000

7. Yuri earns a 25% commission on sales of magazine subscriptions. One week he earned $220. What were Yuri’s total sales for that week?

\[
\frac{y \times 0.25}{0.25} = 220
\]

\[
y = \frac{220}{0.25} = 880
\]

Total sales were $880

8. Monique earns a 30% commission on jewellery sales. She wants to earn $600 so she has spending money for her holidays. What amount of jewellery does she need to sell to reach her goal?

\[
\frac{y \times 0.30}{0.3} = 600
\]

\[
y = \frac{600}{0.3} = 2000
\]

\[\Rightarrow \text{Needs to sell } $2000 \text{ of jewellery.}\]
9. Jules earns a 20% commission on fruit sales. One week, his daily sales were as follows:
   Monday $250
   Tuesday $220
   Wednesday $185
   Thursday $208
   Friday $310

   Total sales = 250 + 220 + 185 + 208 + 310
               = $1173

   a) Commission = 1173 × 0.20
                  = $234.60

   b) Find commission for each day and find the total.

10. Manuel starts a job selling computer equipment. He earns 15% commission on all sales.

    a) Find the total amount of Manuel’s commission for the first three weeks.

    a) Total sales = 1250 + 2100 + 2425
                    = $5775

    Commission = 5775 × 0.15
                 = $866.25

    b) \[
        \frac{y \times 0.15}{0.15} = \frac{500}{0.15}
        \]
        \[
        y = \$3333.33
        \]

    Manuel would need to sell $3333.33 of computer equipment.
11. There are four headliners and six supporting acts booked for your concert. Each of the headliners is paid a 5% commission on total ticket sales. The supporting acts are each paid 2%. Total ticket sales are $1,000,000.

- **a)** Commission = \(1,000,000 \times 0.05\)
  \[= \$50,000\]

- **b)** Commission = \(1,000,000 \times 0.02\)
  \[= \$20,000\]

- **c)** Total paid = \(4(50,000) + 6(20,000)\)
  \[= 200,000 + 120,000\]
  \[= \$320,000\]

- **d)** Headliner commission = \(4 \times 50,000\)
  \[= \$200,000\]
  \[\Rightarrow \$200,000 \div 2 = \$100,000\text{ donated}\]

12. Jackie sells beauty products on commission. She is paid a 25% commission on make-up items and 30% on bath products. Last month her make-up orders totalled $420.95 and the bath product orders totalled $325.00. How much did she earn?

- **Make-up** = $420.95 \times 0.25 = \$105.24
- **Bath products** = $325.00 \times 0.30 = \$97.50

**Total commission** = $105.24 + $97.50 = \$202.74
13. Donna is paid a 25% commission on catalogue sales. She wants to earn $1200 to buy a computer. So far she has sales totalling $3670. How much more does she need to sell to reach her goal?

\[
\text{Commission} = 3670 \times 0.25 \\
\text{So far} = $917.50
\]

\[\Rightarrow \text{Needs} = 1200 - 917.50 = $282.50 \text{ more} \]

Extra Sales needed

\[\Rightarrow y \times 0.25 = \frac{282.50}{0.25} \]

\[y = $1130\]

Donna needs $1130 more sales so she can buy a computer.

14. Brian is offered a job that pays $10/h or 8% commission on sales.

a) One Saturday he works 8 h and sells $500 worth of merchandise. Which payment option is better for him? Explain why.

\[\text{Hourly} = 10 \times 8 = $80 \]

\[\text{Commission} = 500 \times 0.08 = $40 \]

He should take the hourly rate because he earns more.

b) Does your answer change if both rates are doubled? Explain.

\[\text{Hourly} = 20 \times 8 = $160 \]

\[\text{Commission} = 500 \times 0.16 = $80 \]

Same answer!

c) Does your answer change if Brian sells twice as much in the same time period? Explain.

\[\text{Commission} = 1000 \times 0.08 = $80 \]

OR \[= 1000 \times 0.16 = $160 \]

Payment options will be equal.