FRACTIONS

(Part – Whole Concept)

Example 1:
Halimah spent $36 of her money on a calculator and \( \frac{2}{3} \) of her remaining money on an alarm clock. If she had \( \frac{1}{5} \) of her money left, how much money did she have at first?

Ans: _____________

Example 2:
Alan spent \( \frac{2}{3} \) of his money on a WiFi speaker and \( \frac{1}{5} \) of the remaining on a pair of Nike shoes. If he paid a total of $220, how much money did Alan have at first?

Ans: _____________
1. Alvin just received his pocket money. He spent $80 on text books and \( \frac{2}{3} \) of the remainder on comics. If he is left with \( \frac{1}{5} \) of the money, how much money did Alvin have at first?

Ans: _____________

2. Bonny baked a cake. She gave \( \frac{1}{2} \) kg of the cake to a neighbour. She gave \( \frac{1}{6} \) of the remainder to her sister. If she had \( \frac{1}{2} \) left, what was the mass of the cake she baked?

Ans: _____________
3. Candice bought some grapes. She gave $\frac{1}{2}$ kg of the grapes to her daughter and $\frac{3}{4}$ of the remaining to her son. If she had $\frac{1}{6}$ of the grapes left, how many kilogrammes of grapes did she buy?

Ans: ________________

4. Alice has planned to go for a holiday trip. She spent $800 on air ticket to Hong Kong and $\frac{1}{6}$ of the remaining money on a luggage. She had $\frac{1}{2}$ of her money left for trip expenses. How much did she have at first?

Ans: ________________
5. Sam received some pocket money. He spent $100 on a pair of shoes and \( \frac{5}{6} \) of the remaining on a watch. If he had \( \frac{1}{10} \) left, how much did he receive for his pocket money?

Ans: ________________

6. Dan helps his father selling fish balls in the market. He sold 90 of them in the morning and \( \frac{1}{3} \) of the remainder in the afternoon. If he still had \( \frac{1}{2} \) of the stock left at the end of the day, how many fish balls were there in the stall at first?

Ans: ________________
7. Anna read 52 pages of a book on Saturday. On Sunday, she read \( \frac{1}{3} \) of the remaining pages. If she still had \( \frac{1}{2} \) of the book left to be read, how many pages were there in the books?

Ans: _____________

8. Hayden had some marbles. He gave Tom 120 marbles. He gave \( \frac{2}{9} \) of the remainder to Harry. He found that he had \( \frac{1}{2} \) of his original number of marbles left. How many marbles did Hayden have at first?

Ans: _____________
9. Reagan spent $1360 on computer and \( \frac{3}{7} \) of the remainder on a printer. After that he had \( \frac{1}{3} \) of the money left. How much did he have at first?

Ans: _____________

10. Fatimah filled up a jug with some lemon juice. She drank \( \frac{1}{4} \) of it and her sister drank \( \frac{1}{3} \) of the remainder. If they drank a total of 540 ml of the lemon juice, what was the volume of lemon juice in the jug at first?

Ans: _____________
FRACTIONS

(Part – Whole Concept)

Solutions

Example 1.

\[ 2 \times 3 = 6 \text{ units} \]
\[ 6 \text{ units} \]
\[ 3 \text{ units} \]

\[ \frac{2}{3} \text{ of remaining} \]
\[ \frac{1}{5} \text{ left} \]

6 units = $36

1 unit = $36 \div 6
= $6

15 units = 15 \times $6
= $90

Halimah has $90 at first (ans)

Example 2.

\[ 2 \times 5 = 10 \text{ units} \]
\[ 1 \text{ unit} \]
\[ 4 \text{ units} \]

\[ \frac{2}{3} \]
\[ \frac{1}{5} \text{ of remainder} \]

11 units = $220

1 unit = $220 \div 11
= $20

15 units = 15 \times $20
= $300

Alan has $300 at first (ans)
1. 

2 \times 1 = 2 \text{ units} \quad \text{2 units} \quad 1 \text{ unit}

\[ \begin{array}{c}
\text{\$80} \\
\text{\$80}
\end{array} \]

\[ \frac{2}{3} \text{ of the remainder} \quad \frac{1}{5} \]

2 \text{ units} = \$80

1 \text{ unit} = \$80 \div 2

= \$40

5 \text{ units} = 5 \times \$40

= \$200

Alvin has \$200 at first (ans)

2.

4 \text{ units} \quad 1 \text{ unit} \quad 5 \text{ units}

\[ \begin{array}{c}
\text{\frac{1}{2} kg} \\
\text{\frac{1}{6} of remainder}
\end{array} \]

\[ \frac{1}{2} \]

4 \text{ units} = 500 \text{ g}

1 \text{ unit} = 500 \text{ g} \div 4

= 125 \text{ g}

10 \text{ units} = 10 \times 125 \text{ g}

= 1250 \text{ g}

= 1.25 \text{ kg}

Bonny baked 1.25 kg of cake (ans)
3. 2 units 3 units 1 unit

\[ \frac{1}{2} \text{ Kg} \quad \frac{3}{4} \text{ of the remaining } \frac{1}{6} \text{ left} \]

2 units = \( \frac{1}{2} \) kg

1 unit = \( \frac{1}{4} \) kg

6 units = \( 6 \times \frac{1}{4} \) kg

= \( 1\frac{1}{2} \) kg

Candice bought \( 1\frac{1}{2} \) kg of grapes (ans)

4. 4 units 1 unit 5 units

\[ \$800 \quad \frac{1}{6} \text{ of the remaining } \frac{1}{2} \text{ left} \]

4 units = $800

1 unit = $800 \div 4

= $200

10 units = 10 \times $200

= $2000

Alice has $1280 at first (ans)
5. 

<table>
<thead>
<tr>
<th>4 units</th>
<th>5 units</th>
<th>1 unit</th>
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<tbody>
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</table>

$100

\[
\frac{5}{6} \text{ of the remaining} \quad \frac{1}{10} \text{ left}
\]

4 units = $100
1 unit = $100 ÷ 4
= $25
10 units = 10 × $25
= $250

Sam has $250 for his pocket money (ans)

6. 

<table>
<thead>
<tr>
<th>2 units</th>
<th>2 units</th>
<th>4 units</th>
</tr>
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<tbody>
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</table>

Morning \quad Afternoon

90 \quad \frac{1}{3} \text{ of the remaining} \quad \frac{1}{2}

2 units = 90
1 unit = 90 ÷ 2
= 45
8 units = 8 × 45
= 360

There were 360 fish balls in the stall at first (ans)
7. **Saturday**          **Sunday**                          **Left**

54 pages  \( \frac{1}{3} \)  \( \frac{1}{2} \)

3 units = 54
1 unit = \( 54 \div 3 \)
      = 18

\( 2 \times 6 = 12 \) units
12 units = \( 12 \times 18 \)
     = 216

There were 216 pages in the book (ans)

8. **5 units**          **2 units**                          **7 units**

120
\( \frac{2}{9} \) of the remainder \( \frac{1}{2} \)

5 units = 120
1 unit = \( 120 \div 5 \)
      = 24
14 units = \( 14 \times 24 \)
     = 336

Hayden has 336 marbles at first (ans)
9.\[\begin{array}{ccc}
\text{5 units} & \text{3 units} & \text{4 units}
\end{array}\]
\[
\begin{align*}
$1360 & \quad \frac{3}{7} \; \text{of the remainder} & \quad \frac{1}{3} \\
5 \; \text{units} &= 1360 \\
1 \; \text{unit} &= 1360 \div 5 \\
&= 272 \\
12 \; \text{units} &= 12 \times 272 \\
&= 3264
\end{align*}
\]
Reagan has $3264 at first (ans)

10.\[\begin{array}{ccc}
\text{3 units} & \text{3 units} & \text{6 units}
\end{array}\]
\[
\begin{align*}
\frac{1}{4} & \quad \frac{1}{3} \; \text{of the remaining} & \quad 540 \; \text{ml} \\
6 \; \text{units} &= 540 \; \text{ml} \\
1 \; \text{unit} &= 540 \; \text{ml} \div 6 \\
&= 90 \; \text{ml} \\
12 \; \text{units} &= 12 \times 90 \; \text{ml} \\
&= 1080 \; \text{ml} \\
&= 1 \; \text{l}80 \; \text{ml}
\end{align*}
\]
There were 1 litre 80 ml of lemon juice in the jug at first (ans)