Multi-step problems and checking estimates

6 questions | 16 marks

Equivalent correct methods earn the corresponding marks.

1. Join a $\frac{2}{3}$ m strip to a $\frac{5}{6}$ m strip, without overlap. Find the total length. [2 marks]

$\frac{4}{6}+\frac{5}{6}=\frac{9}{6}=\frac{3}{2}$.

Answer: $1\frac{1}{2}$ m

2. Four pens cost 1.65 dollars each. A notebook costs 3.40 dollars. Find the total cost. [2 marks]

$4\times 1.65=6.60;\ 6.60+3.40=10.00$.

Answer: 10.00 dollars

3. Each rice portion uses $\frac{3}{8}$ kg. How many portions can be made from $2\frac{1}{4}$ kg? [2 marks]

$\frac{9}{4}\div\frac{3}{8}=\frac{9}{4}\times\frac{8}{3}=6$.

Answer: 6 portions

4. A walk is $3\frac{1}{2}$ km long. You have walked $1\frac{3}{4}$ km. What fraction of the whole walk remains? [3 marks]

Remaining distance is $\frac{7}{2}-\frac{7}{4}=\frac{7}{4}$ km.

$\frac{7}{4}\div\frac{7}{2}=\frac{1}{2}$.

Answer: $\frac{1}{2}$

5. A 12.5 m roll is cut into four 2.4 m lengths. Estimate and calculate the length left. [3 marks]

Four lengths use 9.6 m.

$12.5-9.6=2.9$ m.

Answer: An estimate near 3 m; exactly 2.9 m.

6. A $\frac{4}{5}$ kg bag is shared equally among six people. How much does each receive? Could each receive $\frac{1}{5}$ kg? Explain. [4 marks]

$\frac{4}{5}\div 6=\frac{2}{15}$.

Six shares of $\frac{1}{5}$ kg would need $\frac{6}{5}$ kg, more than the bag contains.

Answer: $\frac{2}{15}$ kg each; no.