

# Multiply / Divide - Word Problems

3. a)  $\frac{5}{6}$  of £12462      b) Depreciation = lost Value

$$= \frac{12462}{6} \times 5$$
$$= 2077 \times 5$$
$$= \text{£}10385$$
$$= \text{old price} - \text{new price}$$
$$= 12462 - 10385$$
$$= \text{£}2077$$

5.  $\frac{7}{10}$  have a snack,  
so  $\frac{3}{10}$  don't have a snack

$$= \frac{780}{10} \times 3$$
$$= 78 \times 3$$
$$= 234 \text{ pupils}$$

7. a) Horses =  $1 - \frac{1}{5} - \frac{2}{3}$       b) (i) cows =  $\frac{1}{5}$  of 135

$$= \frac{4}{5} - \frac{2}{3}$$
$$\begin{array}{r} \times 3 \left( \frac{12}{15} - \frac{10}{15} \right) \times 5 \end{array}$$
$$= \frac{2}{15}$$

$$= \frac{135}{5} \times 1$$
$$= 27$$

(ii) sheep =  $\frac{2}{3}$  of 135

$$= \frac{135}{3} \times 2$$
$$= 90$$

(iii) horses =  $\frac{2}{15} \times 135$

$$= \frac{135}{15} \times 2$$
$$= 18$$

15.  $\frac{1}{3}$  of  $1\frac{1}{2}$  litres

$$= \frac{1}{3} \times \frac{13}{2}$$

$$= \frac{1}{2} \text{ litre}$$

18. a)  $\frac{11}{14}$  of  $3\frac{1}{2}$  hectares

$$= \frac{11}{2 \cancel{14}} \times \frac{17}{2}$$

$$= \frac{11}{4}$$

$$= 2\frac{3}{4} \text{ hectares}$$

b)  $\frac{3}{14}$  of  $3\frac{1}{2}$  hectares

$$= \frac{3}{2 \cancel{14}} \times \frac{17}{2}$$

$$= \frac{3}{4} \text{ hectare}$$

20. Area = length  $\times$  width

$$= 2\frac{1}{2} \times 1\frac{1}{5}$$

$$= \frac{15}{10} \times \frac{63}{51}$$

$$= 3 \text{ m}^2$$

22. a)  $7\frac{3}{5} \div 1\frac{1}{3}$

$$= \frac{38}{5} \div \frac{4}{3}$$

$$= \frac{19 \cancel{38}}{5} \times \frac{3}{\cancel{4} 2}$$

$$= \frac{57}{10}$$

$$= 5\frac{7}{10}$$

b) # packets  
needed = 6

23. a)  $11\frac{1}{2} \div \frac{3}{4}$

$$= \frac{23}{2} \div \frac{3}{4}$$

$$= \frac{23}{12} \times \frac{4}{3}$$

$$= \frac{46}{3}$$

$$= 15\frac{1}{3}$$

b) # containers  
needed = 16

$$25. a) 14\frac{1}{10} \div \frac{3}{4}$$

$$= \frac{141}{10} \div \frac{3}{4}$$

$$= \frac{\cancel{14}^4}{5\cancel{10}} \times \frac{\cancel{4}^2}{\cancel{3}^1}$$

$$= \frac{94}{5}$$

$$= 18\frac{4}{5}$$

b) # of strips  
cut = 18

26. Area = length x width

$\Rightarrow$  width = Area  $\div$  length

$$a) = \frac{1}{8} \div \frac{1}{2}$$

$$= \frac{1}{8} \div \frac{3}{2}$$

$$= \frac{\cancel{1}^3}{4\cancel{8}} \times \frac{\cancel{2}^1}{\cancel{3}^1}$$

$$= \frac{3}{4} \text{ m}$$

$$b) = 4\frac{2}{3} \div 1\frac{3}{4}$$

$$= \frac{14}{3} \div \frac{7}{4}$$

$$= \frac{\cancel{14}^2}{3} \times \frac{\cancel{4}^1}{\cancel{7}^1}$$

$$= \frac{8}{3}$$

$$= 2\frac{2}{3} \text{ m}$$

$$c) = 7\frac{7}{15} \div 2\frac{1}{3}$$

$$= \frac{112}{15} \div \frac{7}{3}$$

$$= \frac{\cancel{112}^16}{5\cancel{15}} \times \frac{\cancel{3}^1}{\cancel{7}^1}$$

$$= \frac{16}{5} = 5\frac{1}{5} \text{ m}$$

$$d) = 13\frac{2}{9} \div 2\frac{5}{6}$$

$$= \frac{119}{9} \div \frac{17}{6}$$

$$= \frac{\cancel{119}^7}{3} \times \frac{\cancel{6}^2}{\cancel{17}^1}$$

$$= \frac{14}{3}$$

$$= 4\frac{2}{3} \text{ m}$$

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