

## Worksheet 18

### Multiplying Mixed Numbers by Whole Numbers

Solve.

- 1 A small bag of pebbles weighs  $1\frac{1}{2}$  kg. A big bag of pebbles is 3 times as heavy as the small bag. What is the total weight of the two bags of pebbles?

small

big

$$4 \times 1\frac{1}{2} \text{ kg} = 6 \text{ kg}$$

The total of the two bags is 6 kg.

- 2 Charles' daily allowance is £6. Lulu's allowance is  $2\frac{1}{2}$  times as much as Charles' allowance. How much is Lulu's daily allowance?

Charles

Lulu

$$£6 \times 2\frac{1}{2} = £15$$

Lulu's daily allowance is £15.

- 3 Parcel A weighs 3 kg. Parcel B weighs  $2\frac{4}{5}$  times as much as Parcel A.

What is the total weight of the two parcels?

A 

|      |
|------|
| 3 kg |
|------|

B 

|  |  |  |
|--|--|--|
|  |  |  |
|--|--|--|

$$3 \times 2\frac{4}{5} \text{ kg} = 8\frac{2}{5} \text{ kg}$$

$$3 + 8\frac{2}{5} \text{ kg} = 11\frac{2}{5} \text{ kg}$$

The total weight of the two parcels is  $11\frac{2}{5}$  kg

- 4 12 bottles of water are needed to fill a tank to the brim. Each bottle has a capacity of  $1\frac{3}{8}$  l. Find the capacity of the tank.

Tank 

|                  |  |  |  |  |  |  |  |  |  |  |  |
|------------------|--|--|--|--|--|--|--|--|--|--|--|
| $1\frac{3}{8}$ l |  |  |  |  |  |  |  |  |  |  |  |
|------------------|--|--|--|--|--|--|--|--|--|--|--|

$$12 \times 1\frac{3}{8} \text{ l} = 16\frac{1}{2} \text{ l}$$

The capacity of the tank is  $16\frac{1}{2}$  l

Jack runs  $2\frac{2}{3}$  miles three times per week.

Dexter runs  $3\frac{3}{4}$  miles twice a week.

Who runs the furthest during the week?

Explain your answer.

Work out the missing numbers.

$$2\frac{2}{8} \times \square = 7\frac{7}{8}$$

Explain how you worked it out.

# Answers below:

Jack runs  $2\frac{2}{3}$  miles three times per week.

Dexter runs  $3\frac{3}{4}$  miles twice a week.

Who runs the furthest during the week?

Explain your answer.

Jack runs  $2\frac{2}{3} \times 3 = 8$  miles.

Dexter runs  $3\frac{3}{4} \times 2 = 7\frac{1}{2}$  miles.

Jack runs further by half a mile.

Work out the missing numbers.

$$2\frac{\square}{8} \times \square = 7\frac{7}{8}$$

Explain how you worked it out.

Possible answer:

$$2\frac{5}{8} \times 3 = 7\frac{7}{8}$$

I knew that the multiplier could not be 4 because that would give an answer of at least 8. So the multiplier had to be 3. That meant that the missing numerator had to give a product of 15. I knew that 5 multiplied by 3 would give 15