

D: Multiplying Improper Fractions and Mixed Numbers

1. Write multiplication statement
2. Change mixed to improper.
3. Cross Reduce
4. Top x Top; Bot x Bot
5. Reduce if you can.
6. Write a sentence. ***

Examples: [Red Numbers correspond to steps written above]

1. Three and a half laps around a race track equal 5 Km. How many laps are equal to 5 Km?

x - number of laps
 x is $3\frac{1}{2}$ of 5 Km.

$$= 3\frac{1}{2} \times 5 \quad (1)$$

$$17\frac{1}{2} \text{ laps are equal to 5 Km. } (5)$$

$$= \frac{7}{2} \times \frac{5}{1} \quad (2)$$

* No (3)

$$= \frac{35}{2} \quad (4)$$

* No (5)

$$= 17\frac{1}{2} \text{ laps}$$

* Must use mixed because a mixed fraction was given in the question.

2. One day that had $16\frac{3}{4}$ of daylight, it was raining for $\frac{6}{7}$ of that time. For how many hours was it ~~raining~~ raining?

x - hours of rain
 x is $\frac{6}{7}$ of $16\frac{3}{4}$

$$= \frac{6}{7} \times 16\frac{3}{4} \quad (1)$$

$$= \frac{201}{14} \quad (4)$$

* No 5

$$= 14\frac{5}{14}$$

It was raining for $14\frac{5}{14}$ h.

$$= \frac{6}{7} \times \frac{67}{4} \quad (2)$$

$$= \frac{6}{7} \times \frac{67}{4} \quad (3)$$

* Must use a mixed fraction because a mixed fraction was given in the equation.

3. A kitchen is $1\frac{1}{2}$ times as long and $3\frac{1}{2}$ times as wide as a bedroom. How many times greater is the area of the kitchen than the bedroom?

A - times greater the kitchen is

Formula instead of an "of" statement.

$$A = l \times w$$

$$= 1\frac{1}{2} \times 3\frac{1}{2} \quad (1)$$

$$= \frac{3}{2} \times \frac{7}{2} \quad (2)$$

* No (3)

$$= \frac{21}{2} \quad (4)$$

* No (5)

$$= 10\frac{1}{2}$$

The area of the kitchen is $10\frac{1}{2}$ times greater than the bedroom.

4. A store is having a sale. They are selling their products for $\frac{3}{5}$ of the regular price. A product costs \$25. What is the sale price?

x - Sale Price

$$\frac{3}{5} \text{ of } \$25$$

The sale price is \$15.

$$= \frac{3}{5} \times 25 \quad (1)$$

* No (2)

$$= \frac{3}{5} \times \frac{25}{1} \quad (3)$$

$$= \frac{15}{1} \quad (4)$$

* No (5)

$$= \$15$$

Assignment Pg. 220 # 10-18.