

Name: _____

Application of Ratio, Proportions and Rates Worksheet

1. Find the missing numbers

a. $7:8$ _____:40

b. $9:5 =$ _____:45

c. 42 _____= $7:6$

d. $32:8 =$ _____:1

e. $19:$ _____ = $19:12$

f. $100:25=$ _____=1

2. To make sure a ratio is in proportion, we must make sure we have the same units of measurement. The basic unit of length in the metric system is the **meter** and is represented by a lowercase **m**.

Metric Units:

1 Kilometer (km) = 1000 meters

1000mL = 1L

1 Meter = 100 Centimeters (cm)

1000g=1 kg

1 Meter = 1000 Millimeters (mm)

secs-minutes-hours

Convert the following to the correct ratio: Simplify when necessary. Show your working out.

a. 4m to 1.2km = _____

b. 12ml to 0.5L= _____

c. 46 cm to 52cm= _____

d. 14mm and 1.2 cm = _____

e. 120 secs to 2 hours= _____

f. 4.3 L to 224 ml = _____

g. 15 secs to 1.5 mins = _____

h. 3.8kg to 7.5 kg = _____

3. At Australian International Private School, classes were analysed for the number of girls and boys. Complete the following table. Show your working out.

| Class and Number | Ratio of boys to girls | Number of boys | Number of girls |
|--------------------------|-------------------------------|-----------------------|------------------------|
| 6/7A 21 students | 3:4 | | |
| 6/7B 25 students | 2:3 | | |
| 6/7 C 24 students | 2:1 | | |

4. A lottery win of 48, 000AED is shared in a ratio of 3:2:1. Find the amount that each should receive.
HINT: find the total number of parts that need to be shared then write a ratio for each.

5. If 12 meters of fencing wire costs 8 AED, find the costs of these lengths: Show your working out.

Step1: write out a ratio for each lettered question.

Step 2: find the length of wire by solving.

a. 24 metres

b. 48 metres

c. 36 metres

6. The ratio of blue paint to white paint in a paint store is 2:3.

a. Show your working out by finding the number of cans for white paint if there are:

HINT: Step1: write out a ratio for each lettered question as a fraction.

Step 2: solve for the missing value.

i) 40 cans of blue paint

ii) 100 cans of blue paint

iii) 250 paint cans in total

b. Find the number of paint cans in total if there are

i) 15 cans of white paint

ii) 300 cans of blue paint

7. Line Division

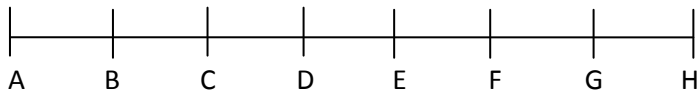
Step 1: Simplify the ratio so that the total number of parts equals the amount of lines on the graph MINUS the line which you will mark.

Step 2: Using the ratio, count along using the first number, make your mark and count along using the next number.

Step 3: Your mark should be on the line which divides the two numbers of the ratio on either side.

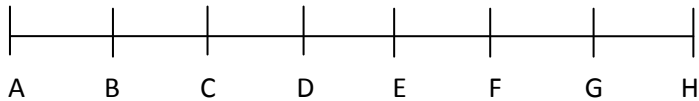
Which point divides the lines in the following ratios? Write the letter in the space provided.

a. Lines A-H



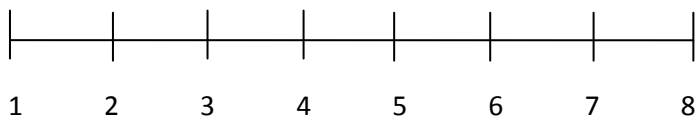
a. 10:4 _____ b. 1:6 _____ c. 4:3 _____ d. 12:2 _____ e. 2:5 _____ f. 3:4 _____

b. Lines A-H



a. 1:6 _____ b. 3:4 _____ c. 4:3 _____ d. 2:5 _____ e. 12:2 _____ f. 10:4 _____

c. Lines 1-8



a. 6:8 _____ b. 4:10 _____ c. 4:3 _____ d. 2:12 _____ e. 2:5 _____ f. 5:2 _____