

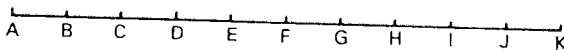
*Exercise 10:04*

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- 1 (a) Divide 16 in the ratio 5 : 3. (b) Divide 200 in the ratio 1 : 4.  
(c) Divide 420 in the ratio 7 : 5. (d) Divide 1510 in the ratio 3 : 2.  
(e) Divide 585 in the ratio 1 : 3 : 5. (f) Divide 41 400 in the ratio 6 : 4 : 5.

- 2 (a) Pewter is made by mixing tin and lead in the ratio 4 : 1. How much of each metal would there be in 20 kg of pewter?
- (b) In a town the ratio of adults to children is 2 : 5. How many children are there in the town if the population is 8400?
- (c) A tin of two-stroke petrol mixture holds 3.9 L. If the mixture is made from petrol and oil in the ratio 25 : 1, find the amount of oil in the mixture.
- (d) A fruit drink is made by mixing juice and water in the ratio 3 : 1. How much juice would be needed to make 1200 mL of drink?
- (e) A brand of fertiliser is made by mixing nitrates, potash and phosphates in the ratio 2 : 3 : 3. How many kilograms of each are in a 50 kg bag of fertiliser?
- (f) A certain range of bricks is made by mixing three different types of bricks in the ratio 4 : 1 : 3. If 28 000 bricks are needed to build a house, how many of each type will be needed?
- (g) A dry concrete mix is made by mixing gravel, sand and cement in the ratio 6 : 4 : 1 by mass. Find the mass of each required to make 66 kg of the dry concrete mix.
- (h) The lengths of the sides of a triangle are in the ratio 1 : 2 : 3. Find the length of the sides, if the triangle has a perimeter of 42.6 cm.

3 (a)



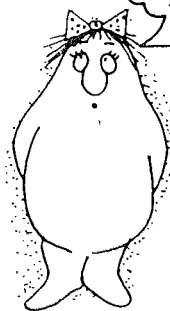
Remember  
"perimeter" is  
the distance  
around the  
figure.

Which point divides the interval  $AK$  in the ratio:

(i) 9 : 1? (ii) 7 : 3? (iii) 3 : ??

(iv) 4 : 1? (v) 1 : 4?

- (b) Draw a line  $AB$ , 12 cm long, and divide it into 6 equal parts. Then find the point which divides the line in the ratio 5 : 1.
- (c) Draw a line 8 cm long and divide it in the ratio 5 : 3.
- (d) Draw a line 6 cm long and divide it in the ratio 1 : 4.



- 4 (a) A rectangle has a perimeter of 64 cm. If the ratio of its length to breadth is 5 : 3, find the length of the rectangle.
- (b) The ratio of the populations of town A and town B is 3 : 8 while the ratio of the populations of town B and town C is 5 : 2. If the total population of the three towns is 85 342, find the population of each town.
- (c) A chemical solution is made by mixing an acid with water in the ratio 1 : 24.

This solution is then taken and mixed with water in the ratio 1 : 3. How much acid would there be in 200 mL of this final solution?

