Revision Exercise (1)

01. (i) Write down a ratio equivalent to 2 : 8 : 5.

(ii) Write down the number of faces, edges and vertices of a square pyramid.

(iii) Write down $1\frac{2}{5}$ as a decimal number.

(iv) Find the value of $64 - 125 \div 5$

(v) Solve $2x + 8 = 16$.

(vi) Write down the ratio 14 : 49 : 35 in its simplest form.

(vii) Find the highest common factor and least common multiple of 63 and 42.

(viii) Construct the straight line segment *AB* of length 6 cm.

(ix) Construct a circle of radius 4 cm.

(x) Write down the number of faces, edges and vertices in a triangular prism.

(xi) Write down all possible outcomes of the experiment of rolling an unbiased cubic die which has its six sides marked 1, 2, 3, 4, 5 and 6.

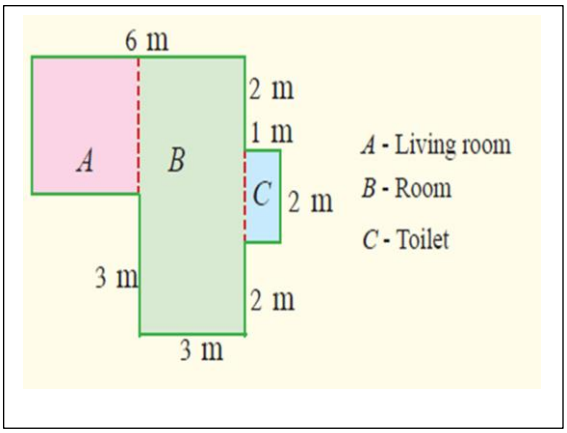
(xii) The length and width of a rectangular land drawn to the scale 1 : 200 are 7 cm and 2.5 cm respectively. Find the actual length and width of the land.

(xiii) In a nutritious instant food packet, green gram, soya and rice are mixed in the ratio 1 : 1 : 3. Find the amount of rice that is included in one such 100 g food packet.

(xiv) Write down Euler's relationship.

(xv) Construct an equilateral triangle of side length 8 cm. Name it *ABC*.

02. The floor plan of a restroom in a tourist inn is shown below.



(i) The living room is square shaped. What is the length of a side of this room?

(ii) Find the area of the living room.

(iii) Find the area of the room.

(iv) Find the area of the toilet.

(v) Find the total perimeter of the restroom.

(vi) It is required to tile the floor of the room with 50 cm × 50 cm square tiles. Find the number of tiles that can be laid in a widthwise row and the number of tiles that can be laid in a lengthwise row. Thereby, obtain the total number of tiles that is required for this purpose.

03. (a) It has been decided to recruit male and female workers to a newly opened garment factory in the ratio 4 : 9.

(i) If the total number of workers that are to be recruited is 260, find separately, the number of male and female workers that are to be recruited.

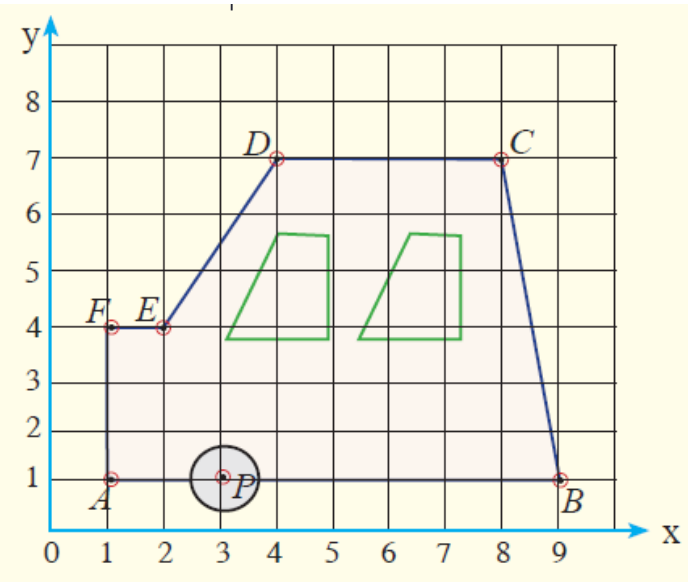
(ii) The ratio of the monthly salary of a male worker to that of a female worker is 5 : 4. If the monthly salary of a female worker is Rs 24 000, find the monthly salary of a male worker.

04. 25 contestants participated in the 1st round of a poetry recitation competition. 12 contestants qualified for the 2nd round.

(i) Express the number of contestants who qualified for the 2nd round as a fraction of the total number of contestants.

(ii) Express the number of contestants who qualified for the 2nd round as a percentage of the total number of contestants.

05. An incomplete figure of a motor car which has been drawn in a Cartesian plane is shown here.



(i) Draw this diagram in a Cartesian plane.

(ii) Which point is represented by the ordered pair (4,7)?

(iii) Write down the coordinates of the points *A*, *P*, *B*, *C*, D, *E* and *F* as ordered pairs.

(iv) If the coordinates of the centre of the back wheel is (7, 1), mark this centre and draw the wheel.

06. (i) Construct a circle of radius 6 cm.

(ii) Construct a regular hexagon with its vertices on this circle.

(iii) Construct an equilateral triangle on each side of the hexagon, external to it.

(iv) Find the perimeter of one of the two largest triangles that you get when you complete the above step.

(v) What is the shape you get when you connect the vertices of the 6 equilateral triangles that do not lie on the original hexagon?