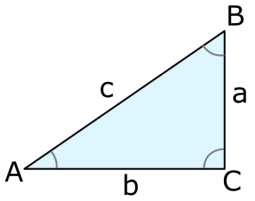
Problems of Basic geometry

1) A right triangle has an area of 960 cm^2 and a cathetus of 60 cm length. Determine:

a) Length of the other cathetus.

b) Hypotenuse.

c) Perimeter.

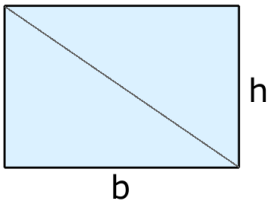


2) Consider a rectangle whose height is 24 cm length and its base is 10 cm length. Calculate:

a) Diagonal.

b) Perimeter.

c) Area.

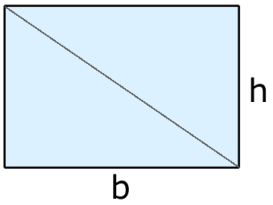


3) A rectangle has a perimeter of 210 cm length and its base is 60 cm length. Find out:

a) Length of its altitude.

b) Diagonal.

c) Area.

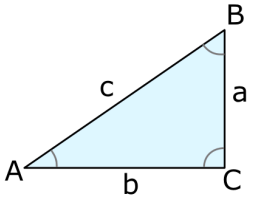


4) A right triangle has a perimeter of 120 cm length and a cathetus of 30 cm length. Determine:

a) Length of the other cathetus.

b) Hypotenuse.

c) Area.

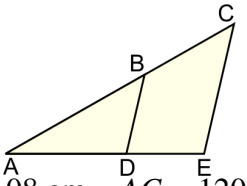


5) Consider the line segments shown below: AB = 96 cm, AC = 160 cm, and AD = 69 cm. Calculate:

a) Length of line segment AE.

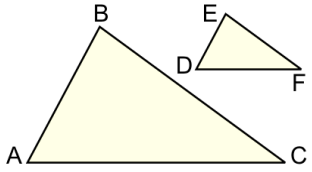
b) Length of line segment DE.

c) Length of line segment BC.



6) Consider the similar triangles shown below with line segments AB = 108 cm, AC = 120 cm, and DE = 72 cm. Find out:

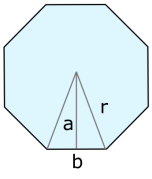
Length of line segment DF.



7) A regular octagon has a side of 28 cm length and its apothem is 33.799 cm length. Calculate:

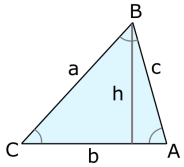
a) Perimeter.

b) Area.



Problems of Basic geometry

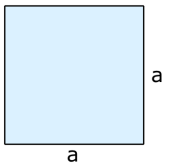
8) A triangle has a base of 16 cm length and its altitude is 63 cm length. Determine its area.



9) A square has a side of 16 cm length. Calculate:

a) Area.

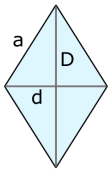
b) Perimeter.



10) The side of a rhombus is 91 cm length and a its diagonal is 70 cm length. Find out:

a) Length of the other diagonal.

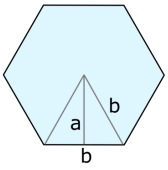
b) Area.



11) Consider a regular hexagon whose side is 15 cm length. Determine:

a) Perimeter.

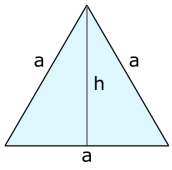
b) Area.



12) An equilateral triangle has a side of 36 cm length. Calculate:

a) Length of its altitude.

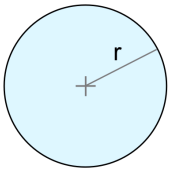
b) Area.



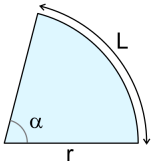
13) The radius of a circle is 37 cm length. Calculate:

a) Area.

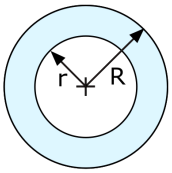
b) Length of its circumference (perimeter).



14) A circular sector has a radius of 8 cm length and an angle of 122°. Find out its area.



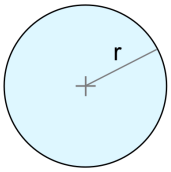
15) An annulus has radii of 31 cm and 42 cm. Determine its area.



16) The perimeter of a circle is 81.681 cm. Find out:

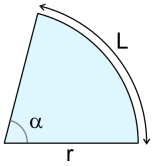
a) Radius.

b) Area.



Problems of Basic geometry

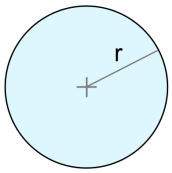
17) Consider a circular sector whose area is 1447.6 cm^2 and its angle is 128°. Calculate its radius.



18) A circle has an area of 2123.7 cm^2. Determine:

a) Radius.

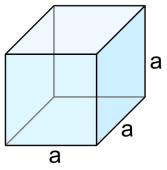
b) Length of its perimeter (circumference).



19) A cube has a volume of 27 cm^3. Determine:

a) Length of its edge.

b) Surface area.

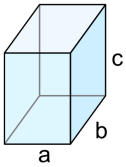


20) The edges of a right prism are 3 cm, 12 cm, and 24 cm. Find out:

a) Volume.

b) Surface area.

c) Space diagonal.



21) The base of a prism is a square whose edge is 18 cm and the altitude is 9 cm length. Determine:

a) Volume.

b) Surface area.

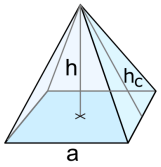
c) Space diagonal.

22) A pyramid has a square base, its altitude is 20 cm and its volume 6000 cm^3. Calculate:

a) Length of edge of the base.

b) Slant height.

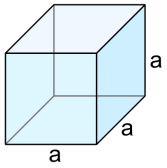
c) Surface area.



23) The surface area of a cube is 2904 cm^2. Find out:

a) Length of its edge.

b) Volume.

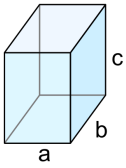


24) A right prism has a base whose edges are 10 cm and 15 cm length and the volume is 4500 cm^3. Determine:

a) Length of its altitude.

b) Surface area.

c) Space diagonal.



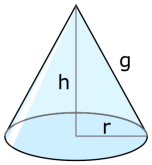
Problems of Basic geometry

25) The radius of a cone is 30 cm and its altitude is 16 cm. Find out:

a) Slant height.

b) Volume.

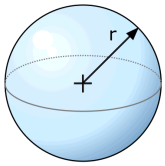
c) Surface area.



26) A sphere has a radius of 8 cm. Determine:

a) Volume.

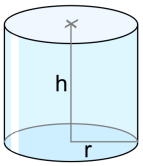
b) Surface area.



27) A cylinder has a radius of 15 cm and an altitude of 20 cm. Calculate:

a) Volume.

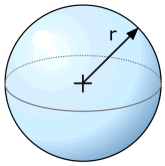
b) Surface area.



28) A sphere has a surface area of 1809.6 cm^2. Determine:

a) Radius.

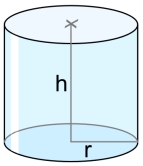
b) Volume.



29) The radius of a cylinder is 5 cm and its volume is 942.48 cm^3. Calculate:

a) Length of its altitude.

b) Surface area.

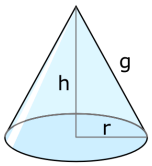


30) A cone has a radius of 8 cm and the volume is 402.12 cm^3. Find out:

a) Length of its altitude.

b) Slant height.

c) Surface area.



Problems of Basic geometry

Answers:

1) **a)** 32 cm; **b)** 68 cm; **c)** 160 cm.
2) **a)** 26 cm; **b)** 68 cm; **c)** 240 cm^2.
3) **a)** 45 cm; **b)** 75 cm; **c)** 2700 cm^2.
4) **a)** 40 cm; **b)** 50 cm; **c)** 600 cm^2.
5) **a)** 115 cm; **b)** 46 cm; **c)** 64 cm.
6) 80 cm.
7) **a)** 224 cm; **b)** 3785.5 cm^2.
8) 504 cm^2.
9) **a)** 256 cm^2; **b)** 64 cm.
10) **a)** 168 cm; **b)** 5880 cm^2.
11) **a)** 90 cm; **b)** 584.57 cm^2.
12) **a)** 31.177 cm; **b)** 561.18 cm^2.
13) **a)** 4300.8 cm^2; **b)** 232.48 cm.
14) 68.138 cm^2.
15) 2522.7 cm^2.
16) **a)** 13 cm; **b)** 530.93 cm^2.
17) 36 cm.
18) **a)** 26 cm; **b)** 163.36 cm.
19) **a)** 3 cm; **b)** 54 cm^2.
20) **a)** 864 cm^3; **b)** 792 cm^2; **c)** 27 cm.
21) **a)** 2916 cm^3; **b)** 1296 cm^2; **c)** 27 cm.
22) **a)** 30 cm; **b)** 25 cm; **c)** 2400 cm^2.
23) **a)** 22 cm; **b)** 10648 cm^3.
24) **a)** 30 cm; **b)** 1800 cm^2; **c)** 35 cm.
25) **a)** 34 cm; **b)** 15080 cm^3; **c)** 6031.9 cm^2.
26) **a)** 2144.7 cm^3; **b)** 804.25 cm^2.
27) **a)** 14137 cm^3; **b)** 3298.7 cm^2.
28) **a)** 12 cm; **b)** 7238.2 cm^3.
29) **a)** 12 cm; **b)** 534.07 cm^2.
30) **a)** 6 cm; **b)** 10 cm; **c)** 452.39 cm^2.