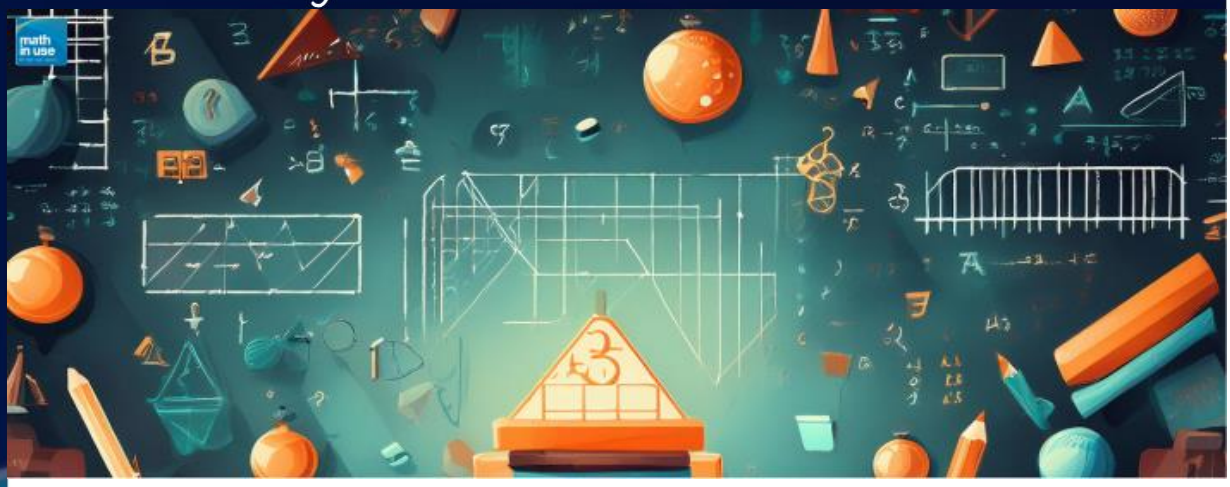


Final Revision
Solid Geometry

Choose the correct answer

The number of straight lines passes through two distincts points is .....

(a) zero (b) 1 (c) 2 (d) infinite number.

Choose the correct answer

The number of planes passes through three collinear points is .....

(a) 1 (b) 2 (c) 3 (d) infinite number.

Choose the correct answer

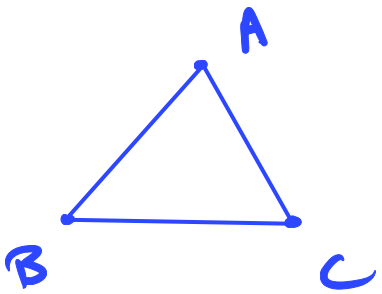
If A , B and C are three points determine a plane , then .....

(a) AB + BC = AC

(b) AB – BC = AC

(c) AB + BC < AC

(d) AC < AB + BC



Choose the correct answer

All the following cases determine a plane except .....

(a) a straight line and a point not on it.

(b) two districts straight lines.

(c) two intersecting straight lines and not coincident.

(d) two skew straight lines.

does not lie on the same plane (diff.)

Choose the correct answer

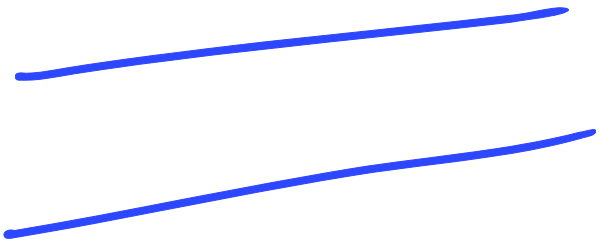
Any three non-collinear points determine .....

(a) a plane. (b) two planes. (c) three planes. (d) four planes.

Choose the correct answer

The number of planes passes through two parallel distinct straight lines = ...

(a) 1 (b) 2 (c) 3 (d) infinite number.

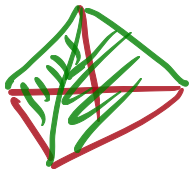


Choose the correct answer

tring. Pyram.

The least number of planes that determine a solide is .....

(a) 3 (b) 4 (c) 2 (d) 5



Choose the correct answer

The skew lines are .....

(a) parallel.

(b) intersecting.

(c) coincident.

(d) not contained in one plane.

Choose the correct answer

The vertical straight lines in the space are .....

(a) parallel.

(b) skew.

(c) intersecting.

(d) contained in one plane.

Choose the correct answer

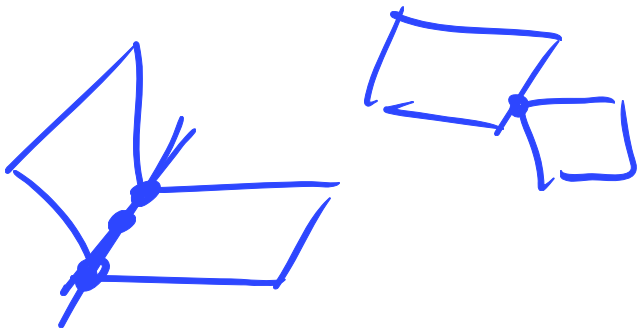
Two planes are coincident if they sharing .....

(a) one point.

(b) three collinear points.

(c) two points. st-line

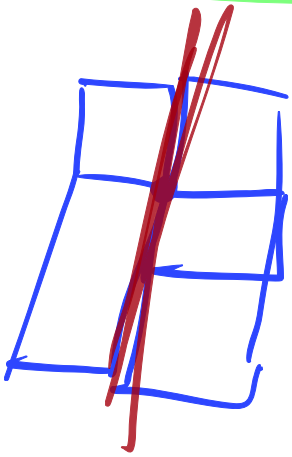
(d) three non collinear points.



Choose the correct answer

Two non-parallel planes intersecting in a .....

(a) line segment. (b) point. (c) ray. (d) straight line.



Choose the correct answer

The number of faces of a regular pentagonal pyramid is .....

(a) 5 (b) 6 (c) 7 (d) 10

5 +1

L. face base

no. of faces = Name + 1

of — Py

oct 8

non 9

Dica 10

Penta 5

hexa 6

hepta 7

Choose the correct answer

In the hexagonal pyramid , the number of faces + the number of its vertices – the number of its edges = ...

6 → 7 + 7 − 12 → 2

(a) 1 (b) 2 (c) 3 (d) 4

الوجوه: Faces = Name + 1

البنط: Vertices = Name + 1

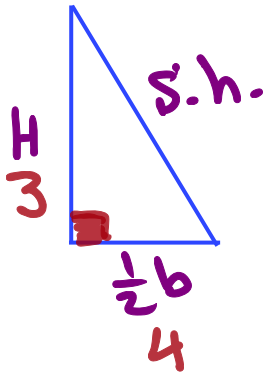
الخطوط: edges = Name × 2

Choose the correct answer

MABCD is a regular quadrilateral pyramid , its base of length 8 cm. and height 3 cm. , then its lateral height = ... cm.

S.h

(a) 3 (b) 4 (c) 5 (d) 8



Choose the correct answer

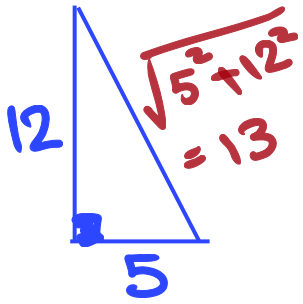
$4\ell = 40 \quad \therefore \ell = 10$

The perimeter of the base in a regular quadrilateral pyramid is 40 cm. and its height is 12 cm. , then its lateral area = ... cm^2

(a) 200 (b) 240 (c) 260 (d) 320

$L.S.A = \frac{1}{2} P.\text{ of base} \times S.h$

$= \frac{1}{2} \times 40 \times 13 = 260$



Choose the correct answer

The length of the base in a regular quadrilateral pyramid = 10 cm , and its slant height = 8 cm. , then its lateral area = ... cm^2.

(a) 800 (b) 400 (c) 320 (d) 160

L.S.A = $\frac{1}{2}$ P. of base × S.h

= $\frac{1}{2}$ (4×10) × 8 = 160 cm^2

Choose the correct answer

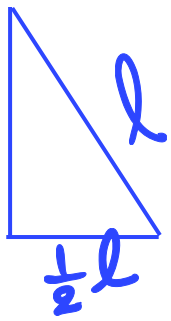
The length of the base in a regular quadrilateral pyramid = its slant height , then the ratio between its lateral area : its total area = ...

(a) 2 : 3 (b) 3 : 4 (c) 1 : 2 (d) 3 : 5

$L.S.A = \frac{1}{2}(4l) \times l = 2l^2$

$T.S.A = 2l^2 + 1l^2 = 3l^2$

$\frac{L.S.A}{T.S.A} = \frac{2l^2}{3l^2} = \frac{2}{3}$



Choose the correct answer

The total surface area of a regular quadrilateral pyramid = 70 cm^2 ,
and its lateral area = 45 cm^2 , then its height = ... cm.

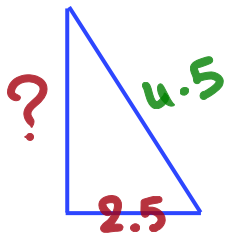
(a) 2.5 (b) 5 (c) 4.5 (d) $\sqrt{14}$

$T.S.A = L.S.A + b.A$

$70 = 45 + b.A$

$b.A. = \ell^2 = 25$

$\ell = \sqrt{25} = 5$



$S.h = \sqrt{4.5^2 - 2.5^2}$

$= \sqrt{14}$

$L.S.A = \frac{1}{2} P.\text{ of base} \times S.h = 45$

$\frac{1}{2}(4 \times 5) \times S.h. = 45$

$S.h = \frac{45}{10} = 4.5$

Choose the correct answer

The volume of a regular quadrilateral pyramid in which the perimeter of its base is 36 cm. and its height 10 cm. equals ..... cm^3.

(a) 180 (b) 270 (c) 360 (d) 810

P. of base $= 4l = 36$

$\therefore l = \frac{36}{4} = 9$ cm

b. A. of quad $= l^2 = (9)^2 = 81$

Volume $= \frac{1}{3}$ b. A $\times$ H $= \frac{1}{3} \times 81 \times 10$

$= 270$ cm^3

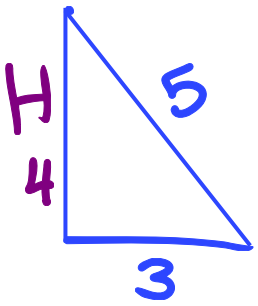
Choose the correct answer

The perimeter of the base of a regular quadrilateral pyramid is 24 cm. , and its slant height 5 cm. , then its volume = ... cm^3.

(a) 60 (b) 90 (c) 72 (d) 48

P. of base = $4l = 24$

$\therefore l = \frac{24}{4} = 6$ cm



Volume = $\frac{1}{3} \times b.A \times H$

$= \frac{1}{3}(6)^2 \times 4 = 48$ cm^3

Choose the correct answer

The volume of a regular pyramid is 12 cm^3 and its base area 4 cm^2 , then its height = ... cm.

(a) 2 (b) 3 (c) 6 (d) 9

Volume $= \frac{1}{3}$ b.A X H = 12

$= \frac{4}{3}$ H = 12

$\therefore$ H = 12 $\div \frac{4}{3}$ = 9 cm

Choose the correct answer

$l \rightarrow 2l$

* If the length of the base in a regular quadrilateral pyramid has been doubled and its height remains constant then its volume .....

(a) will double.

(b) will not change.

(c) becomes 6 times its original volume.

(d) becomes 4 times its original volume.

$$\frac{v_1}{v_2} = \frac{\frac{1}{3}(l)^2 \times H}{\frac{1}{3}(2l)^2 \times H} = \frac{l^2}{4l^2} = \frac{1}{4}$$

Choose the correct answer

square

The diagonal of the base in a regular quadrilateral pyramid is $10\sqrt{2}$ cm. and its height 6 cm. , then its volume = ... cm^3

(a) 100 (b) 200 (c) $100\sqrt{2}$ (d) $200\sqrt{2}$

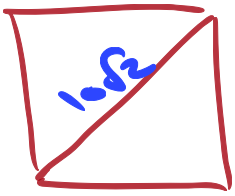
$A.\,of\ square = \frac{1}{2}d^2$

$V = \frac{1}{3}(b.A) \times H$

$= \frac{1}{3}\left(\frac{1}{2}(10\sqrt{2})^2\right) \times 6 = 200\ cm^3$

$A. = l^2$

$\frac{1}{2}d^2$



$A = \frac{1}{2}(10\sqrt{2})^2 = 100\ cm^2$

Choose the correct answer

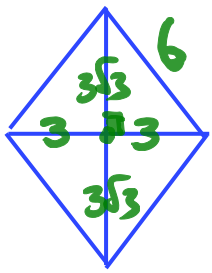
A right quadrilateral pyramid , its base in form of a rhombus , the length of its side = the length of one of its diagonals = 6 cm. , the height of the pyramid = 12 cm. , then its volume = ... cm^3.

(a) 24 (b) $72\sqrt{3}$ (c) 10 (d) 6

A. of Rhombuse $= \frac{1}{2} \times d_1 \times d_2$

$= \frac{1}{2} \times 6 \times 6\sqrt{3}$

$= 18\sqrt{3}$



V. of P. $= \frac{1}{3} \times$ (A. of base (rhombus) $\times$ H

$= \frac{1}{3} \times 18\sqrt{3} \times 12$

$= 72\sqrt{3}\ cm^3$

Choose the correct answer

The length of one side in the base of a regular hexagonal pyramid is 8 cm. and its height is 10 cm. , then its volume equals ..... cm^3.

(a) $160\sqrt{3}$ (b) 160 (c) $320\sqrt{3}$ (d) $960\sqrt{3}$

A. of hexagon $= \frac{n}{4} x^2 \cot \frac{\pi}{n}$

$= \frac{6}{4} \times (8)^2 \times \frac{1}{\tan 30}$

V. of Py $= \frac{1}{3} \times b.A \times H$

$= \frac{1}{3} \times 96\sqrt{3} \times 10 = 320\sqrt{3}$

Choose the correct answer

The length of one side in the base of a regular pentagonal pyramid is 16 cm. and its height is 12 cm. , then its volume ≃ ..... cm^3.

(a) 1761.8 (b) 2341.3 (c) 2000 (d) 1671.8

A. of Penta $= \frac{5}{4}(16)^2 \frac{1}{\tan 36} \simeq 440.44$

Volume $= \frac{1}{3} \times 440.44 \times 12$

$\simeq 1761.8$ cm^3

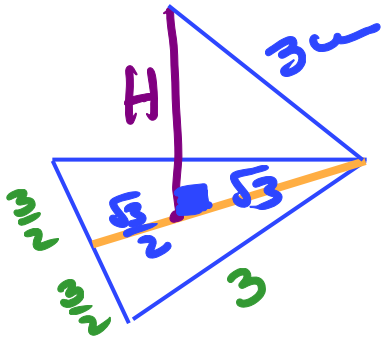
Choose the correct answer

The sum of all edges in a triangular regular faces pyramid equals 18 cm.
, then its height = ... cm.

(a) $2\sqrt{6}$ (b) $\sqrt{6}$ (c) $\sqrt{2}$ (d) $\sqrt{3}$

one edge = 18 ÷ 6
= 3 cm

$H = \sqrt{(3)^2 - (\sqrt{3})^2} = \sqrt{6}$



Choose the correct answer

The ratio between the lateral area and the total surface area of a triangular regular faces pyramid is .....

(a) 3 : 4 (b) 1 : 2 (c) 1 : 3 (d) 1 : 4

$$\frac{L.S.A}{T.S.A} = \frac{3 \text{ faces}}{4 \text{ faces}} = \frac{3}{4}$$

Choose the correct answer

The length of the edge of a triangular regular faces pyramid is 10 cm , then its lateral area = ... cm^2.

(a) $100\sqrt{3}$ (b) $50\sqrt{3}$ (c) $25\sqrt{3}$ (d) $75\sqrt{3}$

L.S.A = 3 × A. of Δ

$= 3 \times [\frac{1}{2} \times x \times x \times \sin 60]$

$= 3 \times \frac{1}{2} \times 10 \times 10 \times \frac{\sqrt{3}}{2}$

Choose the correct answer

If the sum of all edges of a triangular regular faces pyramid equals 18 cm , then its total surface area = ... cm^2.

(a) $\frac{27\sqrt{2}}{4}$ (b) $\frac{27\sqrt{3}}{4}$ (c) $\frac{27\sqrt{2}}{2}$ (d) $9\sqrt{3}$

one edge = $18 \div 6 = 3$ cm

A. of one face (Δ) = $\frac{1}{2} \times x \times x \times \sin 60$

$= \frac{1}{2} \times 3 \times 3 \times \frac{\sqrt{3}}{2}$

$= \frac{9\sqrt{3}}{4}$ cm^2

T.S.A = $4 \times \frac{9\sqrt{3}}{4} = 9\sqrt{3}$ cm^2

Choose the correct answer

The total surface area of a triangular regular faces equals $9\sqrt{3}$ cm^2 then the length of its edge equals ..... cm.

(a) 3 (b) 9 (c) 27 (d) 2

$T.S.A = 4 \times \frac{\sqrt{3}}{4} x^2$

$9\sqrt{3} = \sqrt{3} x^2 \Rightarrow x^2 = 9$

$x = 3$ cm

Sum of edges $3 \times 6 = 18$ cm

Choose the correct answer

A. of base $= \frac{\sqrt{3}}{4} x^2 = \frac{\sqrt{3}}{4}(12)^2$

The volume of a triangular regular faces pyramid that has edge of length 12 cm. equals ..... cm^3.

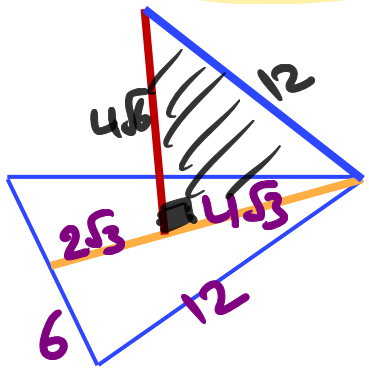
(a) $72\sqrt{2}$ (b) $144\sqrt{3}$ (c) $108\sqrt{3}$ (d) $144\sqrt{2}$

$V = \frac{1}{3}(b.A) \times H$

$= \frac{1}{3} \times 36\sqrt{3} \times 4\sqrt{6}$

$= \frac{1}{3} \times 36 \times 4 \times 3\sqrt{2}$

$= 144\sqrt{2}\ cm^3$



$H = \sqrt{12^2 - (4\sqrt{3})^2}$

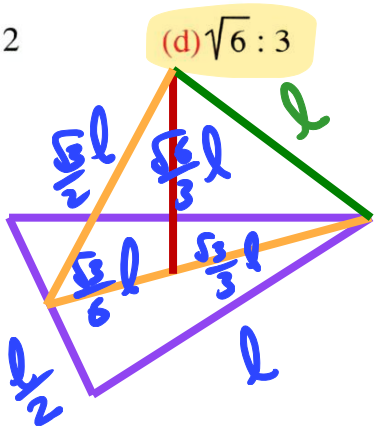
Choose the correct answer

In a triangular regular faces pyramid , the ratio between its height : the length of its edge = ...

(a) $3:\sqrt{6}$ (b) $\sqrt{3}:2$ (c) $\sqrt{6}:2$ (d) $\sqrt{6}:3$

H : e.l

$\frac{\sqrt{6}}{3}l : 1l = \frac{\sqrt{6}}{3}$



S.l : e.l

$\frac{\sqrt{3}}{2}l : l$

$\sqrt{3} : 2$

S.h : H

$\frac{\sqrt{3}}{2}l : \frac{\sqrt{6}}{3}l = 3\sqrt{2} : 4$ (×√2)

$6 : 4\sqrt{2}$

H : S.h

$4\sqrt{2} : 6$

Choose the correct answer

base eq. ∆
face isos.

A regular triangular pyramid , its base length 6 cm. and its height length 12 cm. , then its volume = ... cm^3.

(a) $12\sqrt{3}$ (b) $24\sqrt{3}$ (c) $36\sqrt{3}$ (d) $72\sqrt{3}$

$V = \frac{1}{3} \times b.A \times H$

$= \frac{1}{3} \times \frac{\sqrt{3}}{4}(6)^2 \times 12 = 36\sqrt{3}$ cm^3

$A. = \frac{\sqrt{3}}{4}x^2$

$= \frac{1}{2}x.x\sin 60$

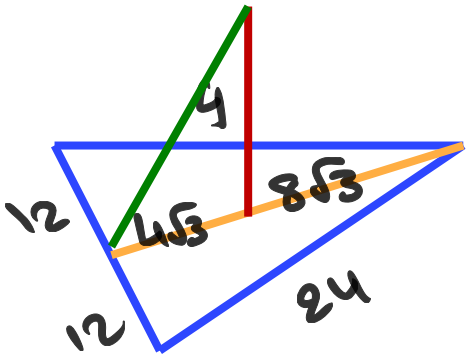
Choose the correct answer

A regular triangular pyramid its base length 24 cm. and its height 4 cm. , then the length of its slant height = ... cm.

(a) 12 (b) 16 (c) 8 (d) 7

S.h = $\sqrt{4^2 + (4\sqrt{3})^2}$

= 8 cm



Choose the correct answer

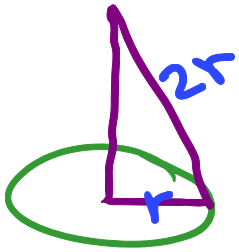
The total surface area of a right circular cone which its drawer length equal the diameter length of its base is .....

(a) $4\pi r^2$ (b) $3\pi r^2$ (c) $3\pi r^3$ (d) $4\pi r^3$

$T.S.A = \pi r l + \pi r^2$ ($l = 2r$)

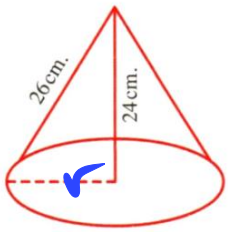
$= 2\pi r^2 + 1\pi r^2$

$= 3\pi r^2$



Choose the correct answer

In the opposite figure :



The height of a right circular cone = 24 cm. ,
and the length of its drawer = 26 cm.
, then the area of its base = ... cm^2.

(a) 20 π πr^2 (b) 25 π

(c) 500 π (d) 100 π

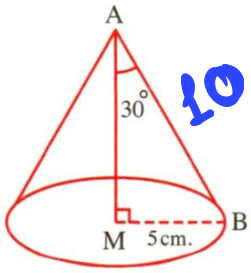
$r^2 = 26^2 - 24^2 = 100$

$A = \pi r^2 = 100\pi$

Choose the correct answer

In the opposite figure :

The lateral area of a right circular cone = ... cm^2.



(a) 25π

(b) 50π

(c) 75π

(d) 100π

L.S.A $= \pi r l = \pi \times 5 \times 10$

$= 50\pi$

Choose the correct answer

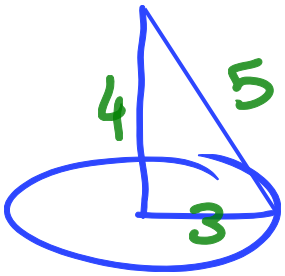
In a right circular cone , the radius length of its base = 3 cm. and its height = 4 cm. , then its lateral area = ... cm^2.

(a) 20π (b) 15π (c) 12π (d) 7π

$L.S.A = \pi \times r \times l$

$= \pi \times 3 \times 5$

$= 15\pi \ cm^2$



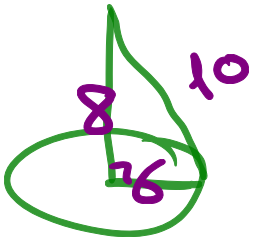
Choose the correct answer

The height of a right circular cone is 8 cm. and the area of its base is 36π cm^2 , then its lateral area = ... cm.^{2}

(a) 72π (b) 64π (c) 60π (d) 54π

A. of base $= \pi r^2 = 36\pi$

$r = \sqrt{36} = 6$



L.S.A $= \pi \times r \times l$

$= \pi \times 6 \times 10 = 60\pi$ cm^2

Choose the correct answer

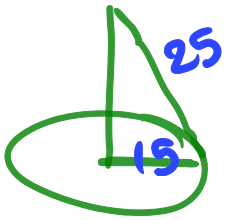
The radius of the base in a right circular cone is 15 cm. and its lateral area = 375 π cm^2 , then its height = ... cm.

(a) 10 (b) 15 (c) 20 (d) 25

$L.S.A = \pi r l = 375\pi$

$15 \pi l = 375 \pi$

$\therefore l = \frac{375}{15} = 25$



$H = \sqrt{25^2 - 15^2} = 20$ cm

Choose the correct answer

If the length of the diameter of the base of a right circular cone is 12 cm. and its height 8 cm. , then its volume equal ..... cm^3.

(a) 48π (b) 36π (c) 32π (d) 96π

$r = 6$

$$\text{V. of Cone} = \frac{1}{3}\pi r^2 H$$

$$= \frac{1}{3} \times \pi \times 6^2 \times 8$$

$$= 96\pi \ cm^3$$

Choose the correct answer

The volume of a cone if the circumference of its base circle is 44 cm. and its height 15 cm = ... cm^3. $\left(\pi = \frac{22}{7}\right)$

(a) 77 (b) 105 (c) 110 (d) 770

$C. = 2\pi r = 44$

$= \frac{44}{7} r = 44$

$\therefore r = 7$ cm

$v = \frac{1}{3} \times \pi r^2 H = \frac{1}{3} \times \frac{22}{7} \times 7^2 \times 15$

$= 770$ cm^3

Choose the correct answer

The volume of a right circular cylinder is 36π cm^3, then the volume of the cone sharing the base and the height with the cylinder = ... cm^3.

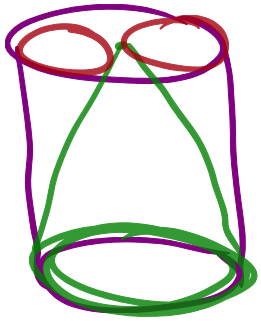
(a) 12π (b) 18π (c) 24π (d) 36π

$\div 3 = 12\pi$

V. of Cylinder $= \pi r^2 h$

V. of Cone $= \frac{1}{3}\pi r^2 h$

Cone $= \frac{1}{3}$ Cylinder



Choose the correct answer

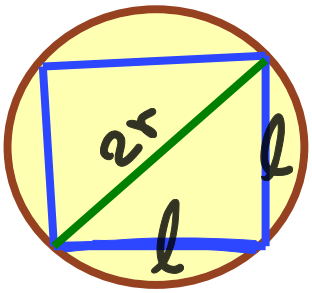
The ratio between the volume of a regular quadrilateral pyramid and the volume of the smallest circular cone contains the pyramid equals .....

(a) $3 : \pi$ (b) $4 : \pi$ (c) $2 : \pi$ (d) $9 : \pi$

$$\frac{\text{V. Py}}{\text{V. Cone}} = \frac{\frac{1}{3} l^2 \times H}{\frac{1}{3} \pi r^2 \times H}$$

$$= \frac{l^2}{\pi r^2}$$

$$= \frac{2r^2}{\pi r^2} = \frac{2}{\pi}$$



$$l^2 + l^2 = 4r^2$$

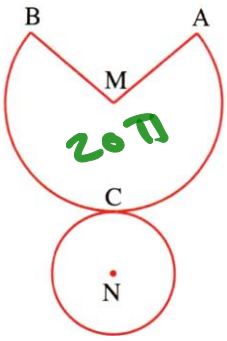
$$2l^2 = 4r^2$$

$$l^2 = 2r^2$$

Choose the correct answer

L.S.A Cone $= \pi r l = 20\pi$

The opposite figure represents a right cone net form from a circular sector whose area is 20π cm^2 ,
the length of its arc $\overset{\frown}{ACB} = 8\pi$ cm.
, then the height of the solid = ... cm.



(a) 3 (b) 2 (c) 5 (d) 4

$2\pi r = 8\pi$

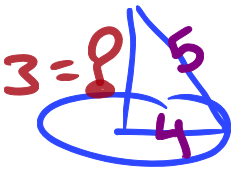
$2r = 8$

$r = 4$

$\pi r l = 20\pi$

$4l = 20$

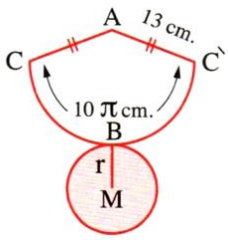
$l = 5$



Choose the correct answer

The opposite net describes a solid

its volume = ... cm^3.



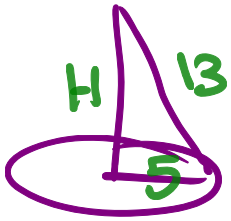
(a) 25π (b) 50π

(c) 75π (d) 100π

drawer of cone = 13

Circ. $= 2\pi r = 10\pi$

$r = 5$



$H. = \sqrt{13^2 - 5^2} = 12$ cm

$v = \frac{1}{3}\pi r^2 H = \frac{1}{3} \times \pi \times 25 \times 12$

$= 100\pi$ cm^3

Choose the correct answer

Cylinder and cone have same base and height , then $\frac{\text{The volume of the cylinder}}{\text{the volume of the cone}} = \ldots\ldots\ldots$

(a) $\frac{2}{3}$ (b) $\frac{1}{3}$ (c) $\frac{1}{4}$ (d) $\frac{3}{1}$

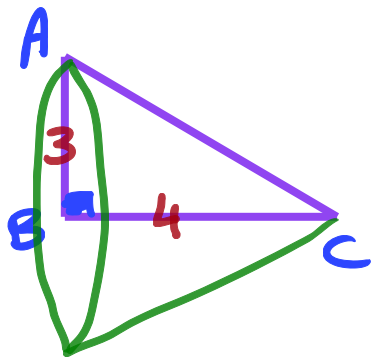
$$= \frac{1\pi r^2 H}{\frac{1}{3}\pi r^2 H} = \frac{1}{\frac{1}{3}} = \frac{3}{1}$$

Choose the correct answer

حلو أووووى

ABC is a right-angled triangle at B in which AB = 3 cm. , BC = 4 cm. , then the volume of the solid generated by revolving Δ ABC a complete revolution around its axis $\overline{BC}$ is ..... cm^3.

(a) 16π (b) 18π (c) 15π (d) 12π



$r = 3$ — $H = 4$

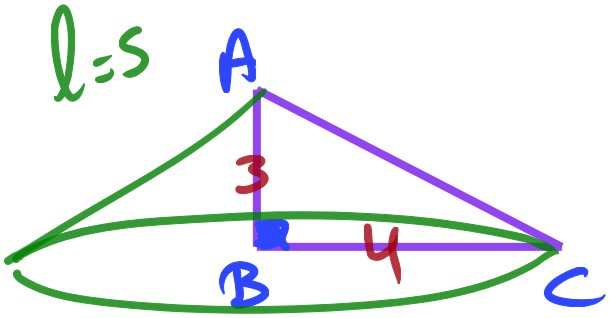
$l = 5$ —

$v = \frac{1}{3} \times \pi r^2 H$

$= \frac{1}{3} \times \pi \times 3^2 \times 4$

$= 12\pi$

$r = 4$ $H = 3$ $l = 5$



$v = \frac{1}{3} \times \pi \times 16 \times 3$

$= 16\pi$

Choose the correct answer

The centre of the circle whose equation : $(x + 2)^2 + y^2 + 2y = 0$ is .....

(a) $(2 , 2)$ (b) $(-2 , -1)$ (c) $(2 , -1)$ (d) $(-2 , 0)$

$x^2+4x+4+y^2+2y=0$

$x^2+y^2+4x+2y+4=0$

$M=(-2,-1)$

Choose the correct answer

The diameter length of the circle : $4x^2 + 4y^2 + 16x - 8y - 16 = 0$

equals ..... length unit.

(a) 3 (b) 6 (c) 12 (d) 24

$x^2 + y^2 + 4x - 2y - 4 = 0$ (c = −4)

$l = 2$ $k = -1$

$r^2 = l^2 + k^2 - c = 4 + 1 - (-4) = 9$

$r = \sqrt{9} = 3 \Rightarrow D = 6$

Choose the correct answer

If the equation of a circle is : $(x+1)^2 + (y+3)^2 = 9$, then the area of the circle is .....

r^2

(a) π (b) 3π (c) 6π (d) 9π

$A = \pi r^2 = \pi \times 9 = 9\pi$

Choose the correct answer

$x^2+y^2=r^2$

The area of the circle whose equation is : $x^2 + y^2 = \pi$ is ..... square units.

(a) π (b) 2π (c) π^2 (d) π^3

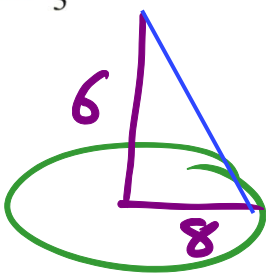
A. of circle $= \pi r^2$

$\pi \times \pi = \pi^2$

Choose the correct answer

The height of a right circular cone is 6 length units and the equation of its circular base is : $x^2 + y^2 = 64$ in the x y-plane , then the volume of the cone = ... cubic units.

(a) 96π (b) 128π (c) $\frac{128}{3}\pi$ (d) $\frac{640}{3}\pi$



$r^2 = 64$

$r = \sqrt{64} = 8$

drawer $= l = 10$

$v = \frac{1}{3} \times \pi \times (8)^2 \times 6 = 128\pi$

Choose the correct answer

If the equation : $2x^2 + ay^2 + bxy - 8 = 0$ represents a circle , then its area = ... square unit.

(a) 2π (b) 4π (c) 64π (d) 16π

$a = 2$ $b = 0$

$2x^2 + 2y^2 = 8$

$x^2 + y^2 = 4$ (r^2)

Choose the correct answer

If the equation of a circle passes through the origin is :

$a x^2 + 2 y^2 + 4 x + (b + 2) x y - 8 y + c - 2 = 0$, then $a + b + 2 c =$ .....

(a) 2 (b) – 2 (c) 4 (d) 8

Const

$a = 2$

$b + 2 = 0$

$b = -2$

$c - 2 = 0$

$c = 2$

$a + b + 2c = 2 + (-2) + 2(2) = 4$

Choose the correct answer

The circle with the equation : $2\begin{vmatrix} x & -y \\ y & x \end{vmatrix} - 50 = 0$ has circumference = ... length unit.

(a) 5π (b) 10π (c) 15π (d) 25π

$2[x^2+y^2] = 50$

$x^2+y^2 = 25$ $\quad r^2 = 25$

$\therefore r = 5$

Circ. $= 2\pi r = 2 \times \pi \times 5$

$= 10\pi$

Choose the correct answer

If $(x \quad y \quad 12)\begin{pmatrix} x \\ y \\ -3 \end{pmatrix} = \square$, represents a circle with circumference = ... length unit.

(a) 8π (b) 12π (c) 14π (d) 16π

$x^2 + y^2 - 36 = 0$

$x^2 + y^2 = 36$ $\quad \therefore r = 6$ L.u.

Circ. $= 2\pi r = 2 \times \pi \times 6 = 12\pi$

Choose the correct answer

The point which lies on the circle : $(x-2)^2 + y^2 = 13$ from the following is .....

(a) (2 , 3) (b) (3 , – 2) (c) (2 , 5) (d) (4 , 3)

ins
9 < 13

1 + 4 in
5 < 13

25 > 13
out

4 + 9 = 13

Choose the correct answer

The equation of the circle whose center is the point $(-3, -4)$ and passes through the point $(-3, 0)$ is .....

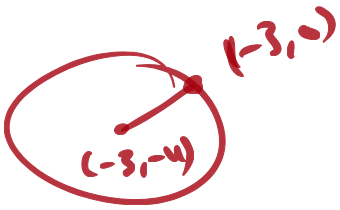
(a) $(x+3)^2 + (y+4)^2 = 16$

(b) $(x+3)^2 + (y+4)^2 = 9$

(c) $(x-3)^2 + (y-4)^2 = 16$

(d) $(x-3)^2 + (y-4)^2 = 9$

$r = \sqrt{(-3+3)^2 + (0+4)^2} = 4$



$(x-d)^2 + (y-h)^2 = r^2$

$(x+3)^2 + (y+4)^2 = 16$

Choose the correct answer

The general form of the circle in which $\overline{AB}$ is a diameter where A (2 , 3) , B (– 4 , 9) is .....

(a) $x^2 + y^2 - 4x - 6y + 18 = 0$

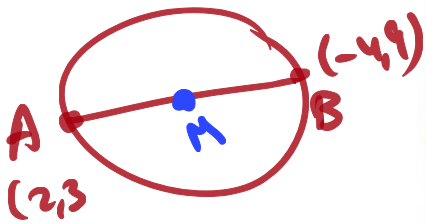
(b) $(x + 4)^2 + (y - 9)^2 = 72$

(c) $x^2 + y^2 - 2x + 12y + 19 = 0$

(d) $x^2 + y^2 + 2x - 12y + 19 = 0$

Diameter $= \sqrt{(-4-2)^2 + (9-3)^2}$

$= 6\sqrt{2}$ l.u.



$r = \frac{1}{2}D = 3\sqrt{2}$

$M = \left(\frac{2+(-4)}{2}, \frac{3+9}{2}\right) = (-1, 6)$

$l = 1$ $k = -6$

$c = l^2 + k^2 - r^2$

$1 + 36 - 18 = 19$

$x^2 + y^2 + 2lx + 2ky + c = 0$

$x^2 + y^2 + 2x - 12y + 19 = 0$

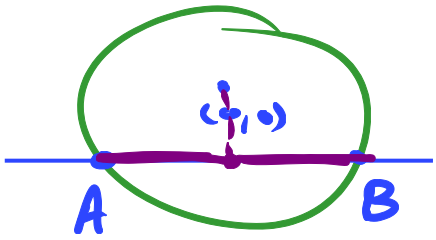
Choose the correct answer

If X-axis intersects the circle whose equation : $x^2 + y^2 = 49$ at the two points A and B , then AB = ... length unit.

(a) 49 (b) 7 (c) 2 (d) 14

$x^2 = 49$

$x = \pm 7$



$(x,0)$ $(x,0)$

$(-7,0)$ $(7,0)$

Choose the correct answer

If the straight line : $3x - 4y - 12 = 0$ touches the circle $(x + 3)^2 + (y - 1)^2 = r^2$, then the circumference of the circle = ... length unit.

(a) 20π (b) 15π (c) 10π (d) 5π

$$r = \frac{|3(-3) - 4(1) - 12|}{\sqrt{9 + 16}}$$

$$= \frac{25}{5} = 5$$

$$\text{Circ.} = 2\pi r = 10\pi$$

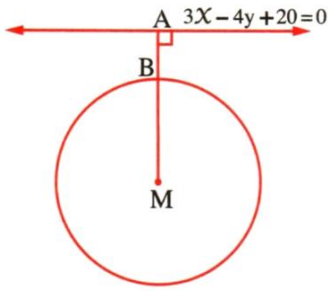
Choose the correct answer

In the opposite figure :

M is a circle , its equation : $(x-2)^2+(y+1)^2=16$

$\overline{MA} \perp$ the straight line : $3x-4y+20=0$

, then AB = ...



(a) 2 (b) 4

(c) 6 (d) 8

Choose the correct answer

Area of the square whose vertices lie on the circle : $x^2 + y^2 - 4x + 6y + 4 = 0$ is ..... square units.

(a) 6 (b) 9 (c) 12 (d) 18

Choose the correct answer

The two circles $C_1 : x^2 + y^2 + 4x - 2y + 1 = 0$, $C_2 : (x-5)^2 + (y-3)^2 = 9$ .....

(a) distant.

(b) touching externally.

(c) touching internally.

(d) intersecting.

Choose the correct answer

In the opposite figure :

The equation of the circle :

$(x - 2)^2 + (y - 3)^2 = 25$

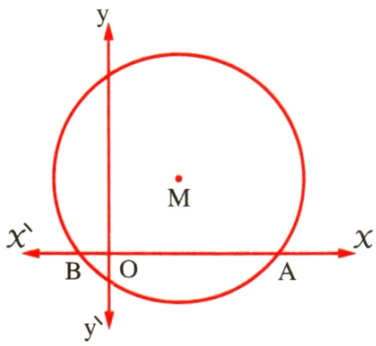
, then AB = ... length unit.

(a) 8

(b) 6

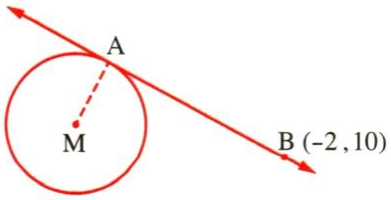
(c) 4

(d) 5



Choose the correct answer

In the opposite figure :



The equation of the circle : $(x - 3)^2 + (y + 2)^2 = 25$, $\overline{AB}$ is a tangent to the circle M At A where B $(-2 , 10)$, then AB = ... length unit

(a) 13 (b) 5 (c) 12 (d) $\sqrt{194}$

Choose the correct answer

A cube of wax of edge length 10 cm. it was melted and transformed into a regular quadrilateral pyramid of base length 10 cm. Find the height of the pyramid given that 10 % of the wax was lost during melting.

Choose the correct answer

The opposite figure shows a coordinate perpendicular plane. Calculate the volume of solid generated when revolving triangle ABO one complete revolution around the y-axis.