

	Formulas		Formulas
Surface Area of a Cylinder	$SA = 2\pi r^2 + 2\pi rh$	Volume of a Sphere	$V = \frac{4}{3}\pi r^3$
Surface Area of a Cone	$SA = \pi r^2 + \pi rs$	Volume of a Cone	$V = \frac{1}{3}\pi r^2 h$
Surface Area of a Sphere	$SA = 4\pi r^2$	Volume of a Pyramid	$V = \frac{1}{3}Ah$

Part 1: Multiple Choice. 6 marks

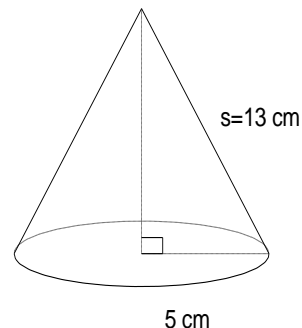
Place the letter of the correct response in the space provided on the right.

1. A square pyramid has a height of 24 in. and a base length of 14 cm, what is the slant height of the square pyramid? 1. C

A) 17 B) 23
C) 25 D) 31

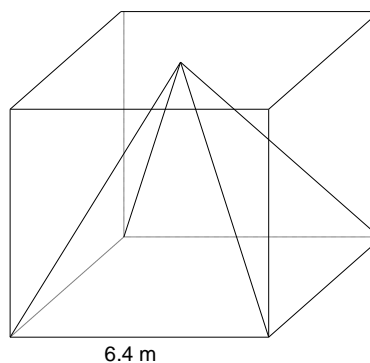
2. A cone has a radius of 5 cm and a slant height of 13 cm. What is its surface area (including the base), to the nearest square centimetre? 2. C

A) 263 cm^2
B) 273 cm^2
C) 283 cm^2
D) 293 cm^2



3. What is the volume of the pyramid that just fits inside the cube? 3. B

A) 13.65 m^3
B) 87.38 m^3
C) 262.14 m^3
D) 785.43 m^3



4. A cone and a cylinder have the same height and the same base radius. If volume of the cylinder is 81 cm^3 , what is the volume of the cone in cm^3 ? 4. B

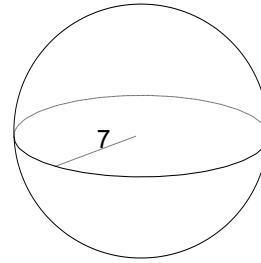
A) 9
B) 27
C) 78
D) 243

5. A square pyramid has a base length of 6 in. and has a volume of 108 in.^3 , what is the height? 5. C

A) 3 in.
B) 6 in.
C) 9 in.
D) 12 in.

6. What is the surface area of the sphere, to the nearest tenth of a square inch, if $d = 14$ in.? 6. A

- A) 615.8 in^2
- B) 1436.8 in^2
- C) 2463.0 in^2
- D) 4310.3 in^2



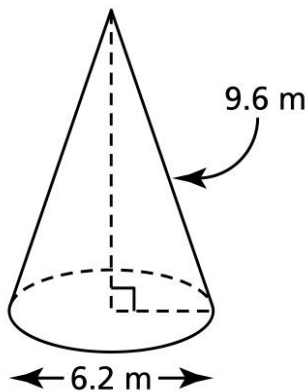
Part 2: Constructed Response. 15 marks

Show ALL required workings in the space provided to receive FULL credit.

1. The surface area of a right cone is 185 in^2 and its radius is 4.7 in. What is the slant height of the right cone to one decimal place? (3 Marks)

$SA = \pi r^2 + \pi rs$ **slant height = 7.8m**

2. Calculate the volume of the cone to one decimal place. (3 Marks)

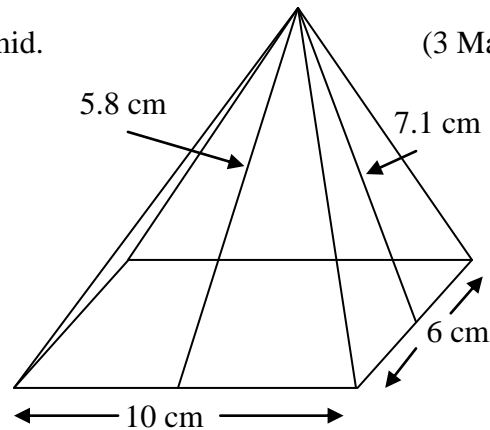


*** need height $h = 9.1 \text{ m}$**

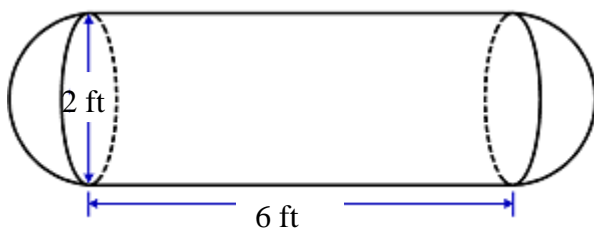
$V = 91.5 \text{ m}^3$

3. Calculate the surface area of the rectangular pyramid. (3 Marks)

Surface Area = 160.6 cm^2



4. Determine the volume of the composite object to the nearest tenth of a cubic centimeter. (3 Marks)



V of sphere = 4.2 ft^3

V of cylinder = 18.84 ft^3

Composite Volume = 23.04 ft^3