

	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**

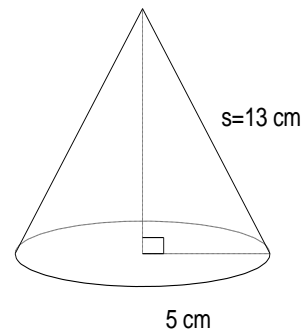
Place the letter of the correct response in the space provided on the right.

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. \_\_\_\_

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

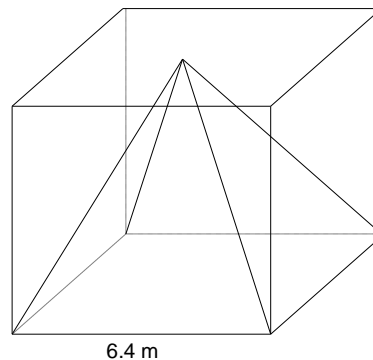
2. A cone has a radius of 5 cm and a slant height of 13 cm. What is its surface area (including the base), to the nearest square centimetre? 2. \_\_\_\_

A) 263 cm<sup>2</sup>  
B) 273 cm<sup>2</sup>  
C) 283 cm<sup>2</sup>  
D) 293 cm<sup>2</sup>



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

A) 13.65m<sup>3</sup>  
B) 87.38m<sup>3</sup>  
C) 262.14m<sup>3</sup>  
D) 785.43m<sup>3</sup>



4. A cone and a cylinder have the same height and the same base radius. If volume of the cylinder is 81 cm<sup>3</sup>, what is the volume of the cone in cm<sup>3</sup>? 4. \_\_\_\_

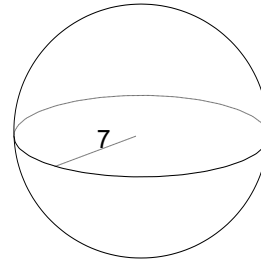
A) 9  
B) 27  
C) 78  
D) 243

5. A square pyramid has a base length of 6 in. and has a volume of 108 in.<sup>3</sup>, what is the height? 5. \_\_\_\_

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)  $615.8 \text{ in}^2$
- B)  $1436.8 \text{ in}^2$
- C)  $2463.0 \text{ in}^2$
- D)  $4310.3 \text{ in}^2$

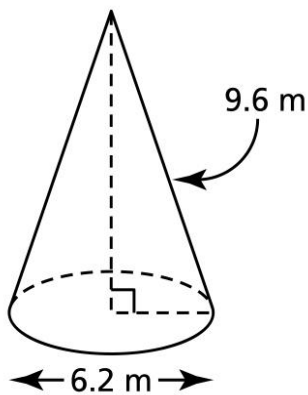


**Part 2: Constructed Response. 15 marks**

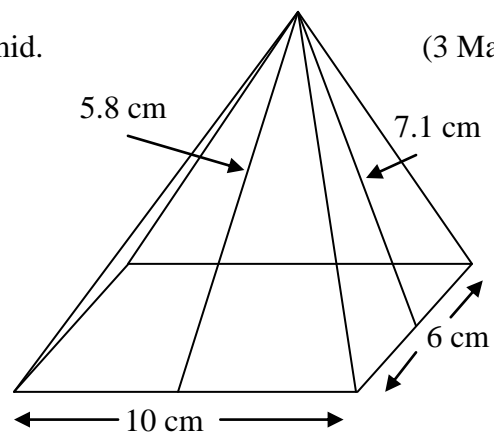
Show ALL required workings in the space provided to receive FULL credit.

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

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



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



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

