

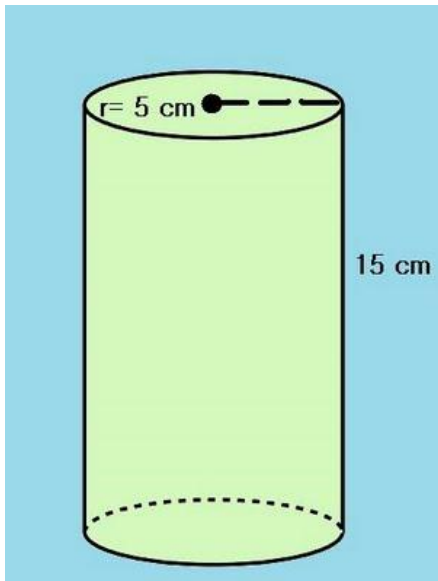
## MFM1P – Surface Area Assignment

*Eureka! Eureka! Eureka!*

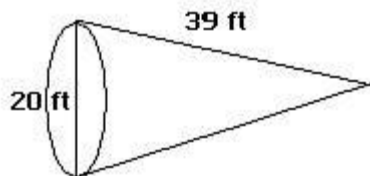
Use scientific problem solving thinking strategies to resolve the following problems:

- Step 1: I make a list of what I know and what I don't know. (1 point)  
Step 2: I make a diagram (if necessary).  
Step 3: I state appropriate relationships (usually on your formulae sheet) (1 point)  
Step 4: I use algebra to isolate the unknown variable (if necessary). (1.5 points)  
Step 5: I plug in the known variables and evaluate the problem. (1.5 points)  
Step 6: I state the unknown variable's value with proper units. (1 point)

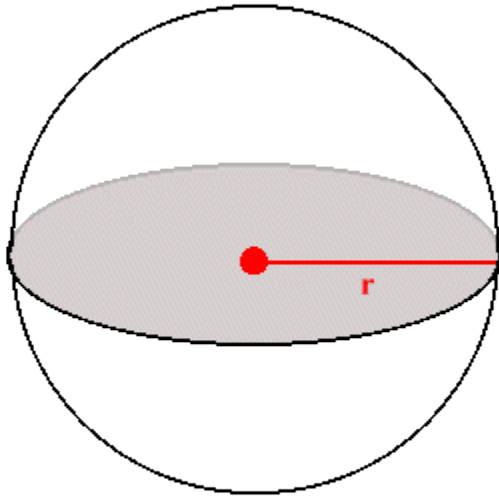
1. Given the cylinder below, find the surface area. Show all your work. (5 marks)



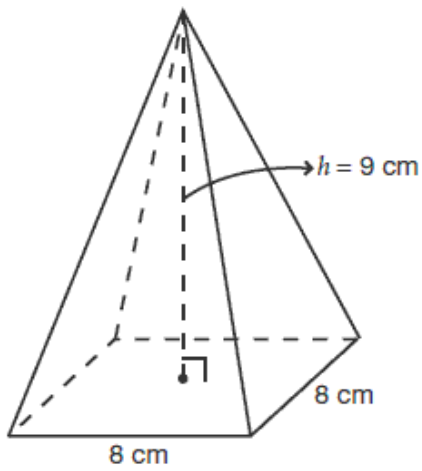
2. Given the cone below, whose slant length is 39ft and whose diameter is 20 ft, find the surface area. Hint: You will need to find the height of the cone using PT. (6 marks)



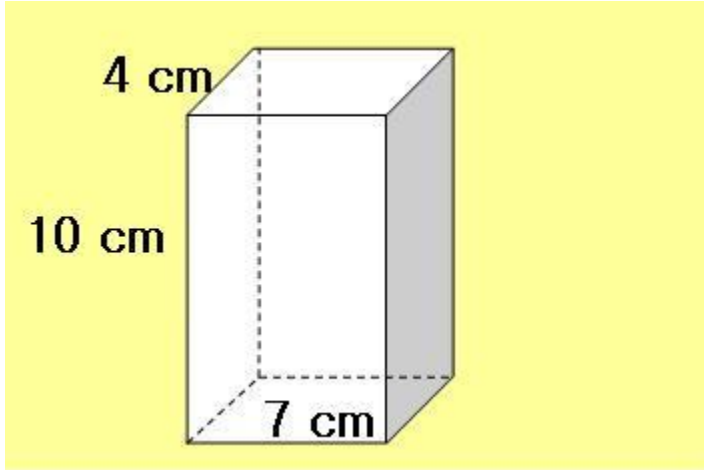
3. Find the surface area of the sphere given that the radius is  $r = 10.5\text{cm}$ . (4 marks)



4. Find the surface area of the pyramid below. (5 marks)



5. Find the surface area of the following triangular prism given the dimensions below. Show all your work. (4 marks)



6. The grain silo on the left is going to be painted so not to waste used paint. The silo is 23 m high and has a diameter of 5.5m. What is the surface area that needs to be painted? Only the outside needs a coat of paint. (6 marks)

