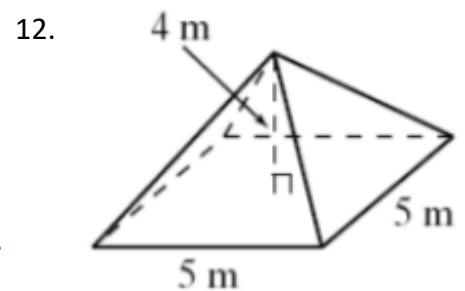
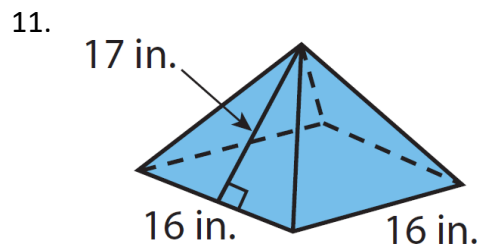
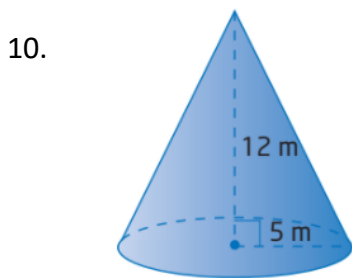
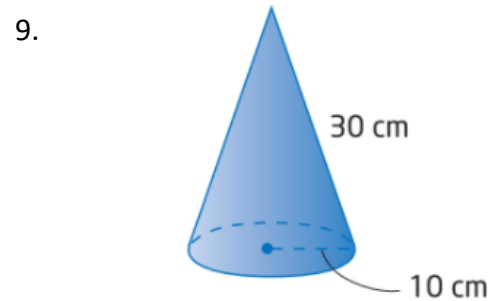
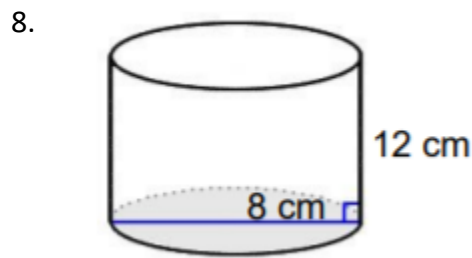
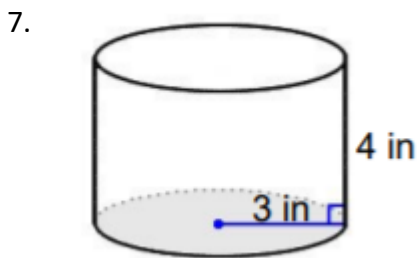
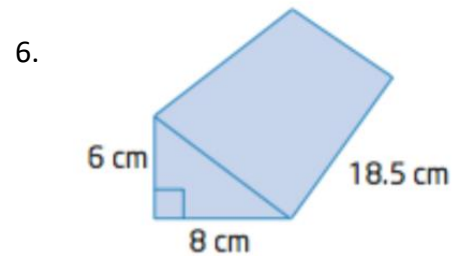
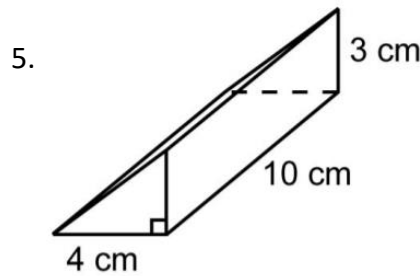
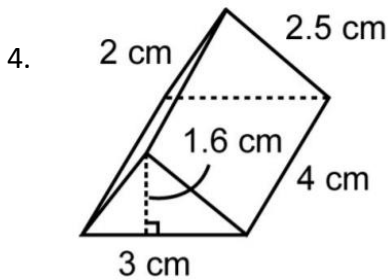
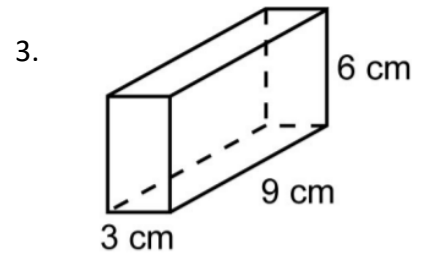
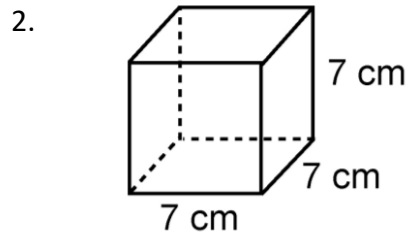
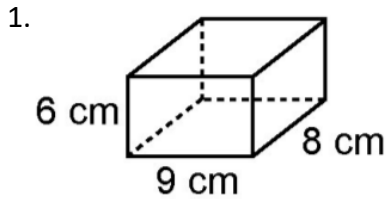


## 5.9 HOMEWORK HANDOUT: SURFACE AREA OF 3D OBJECTS

### PART A

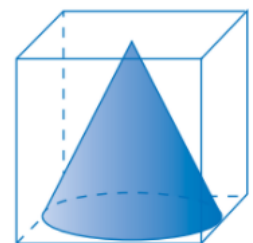
Find the surface area of the following objects. Round to two decimal places where necessary.



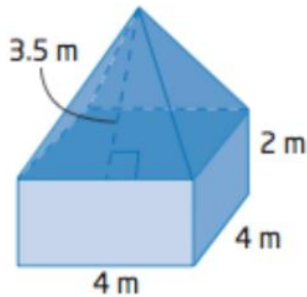
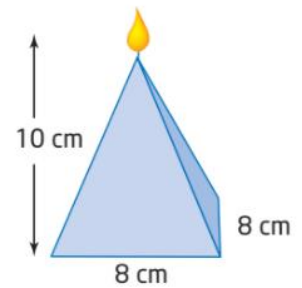
### PART B

13. A cube-shaped box has sides of 10cm in length.

- What are the dimensions of the largest cone that can fit in the box?
- What is the surface area of this cone, to the nearest square centimetre?



14. A candle is in the shape of a square-based pyramid. Determine how much plastic wrap, to the nearest tenth, you would need to completely cover the candle.



15. Adam has built a garden shed in the shape shown to the right. Adam plans to paint the outside of the shed, including the roof, but not the floor. One can of paint covers  $4\text{m}^2$ .

- a) How many cans of paint will Adam need?  
 b) If a can of paint costs \$16.95, how much will it cost (including 13% tax)?

### PART C

16. Find the side-length of a cube with a surface area of  $726\text{cm}^2$ .
17. The area of the base of a cylinder is  $30\text{cm}^2$ . Determine the surface area of the entire cylinder if it has a height of 22cm.
18. A square-based pyramid has a slant height that is equal to the side-length of the base. If the total surface area of the pyramid is  $300\text{cm}^2$ , what is the height of the pyramid?

### ANSWERS

1.  $348\text{cm}^2$  2.  $294\text{cm}^2$  3.  $198\text{cm}^3$  4.  $34.8\text{cm}^2$  5.  $132\text{cm}^2$  6.  $492\text{cm}^2$  7.  $131.95\text{ in.}^2$   
 8.  $402.12\text{cm}^2$  9.  $1256.64\text{cm}^2$  10.  $282.74\text{m}^2$  11.  $800\text{in.}^2$  12.  $72.2\text{m}^2$
13. a) It would have a height of 10cm and a radius of 5cm. b)  $254.16\text{cm}^2$
14.  $236.33\text{cm}^2$  15. a)  $76\text{m}^2$ ; Adam needs 19 cans of paint b) \$363.92
16. 11cm 17.  $487.16\text{cm}^2$  18. 8.66cm