*What’s the Overlap* Answers

**Shape and Space**

**Unit 2 Line Master 1d**

1. a) Cylinder: S.A. = 2π*rh* + 2π*r*2  ≈ 1885

S.A. is about 1885 cm2.

b) Cube: S.A. = 6*s*2 = (6) S.A. is 2400 cm2.

c) An area equal to the size of one circular face from both objects.   
 Area circle = π*r*2;  
 Overlap: about 628 cm2

d) 1885 cm2 + 2400 cm2 – 628 cm2 = 3657 cm2 S.A. is about 3657 cm2.

2. a) Triangular prism: To determine the area of the triangular faces, I need to find the missing side length. I can use the Pythagorean Theorem. , .  
   
 S.A. is 4288 cm2.

b) Square prism:   
 S.A. is 5600 cm2.

c) The area of one long rectangular face from both prisms:

Overlap: 2400 cm2

d) 4288 cm2 + 5600 cm2 – 2400 cm2 = 7488 cm2 S.A. is 7488 cm2.

3. Note: If student observes that this prism and this cylinder have the same dimensions as in Q1 and Q2, they might give the answers without calculations.

a) Triangular prism:

S.A. is 4288 cm2.

b) Cylinders (2): S.A. = 2(2π*rh* + 2π*r*2) ≈ 2(1885) = 3770

S.A. is about 3770 cm2.

c) Area of circle = π*r* 2, so area equal to 4 circular faces: Overlap: about 1256 cm2

d) 4288 cm2 + 3770 cm2 – 1256 cm2 = 6802 cm2 S.A. is about 6802 cm2.