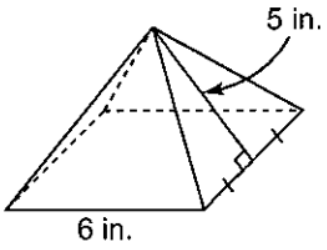
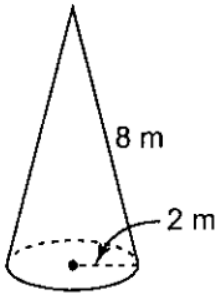
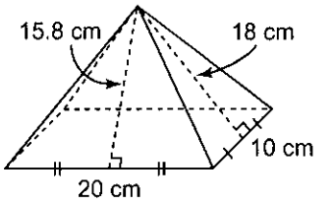
Math 10C **Name: _____**
Assignment 1.4

1. Find the surface area of each object, to the nearest square unit.

	a) square pyramid Area of the base is: ____ Area of each triangular face is: $\frac{1}{2}$x ____ x ____ = ____ Area of all 4 triangular faces is: 4 x ____ = ____ The surface area of the pyramid is: ____ + ____ = ____ The surface area of the pyramid is: ____ in^2
	b) a cone SA =$\pi r s + \pi r^2$ SA = ____ + ____ SA =____ The surface area is about: _____
	c) a rectangular pyramid The area of the base is: ____ Two triangular faces have a base ____ and a height ____ Area of the 2 faces is: 2 x $\frac{1}{2}$x ____ x ____ = ____ Two triangular faces have: a base ____ and a height ____ Area of the 2 faces is: 2 x $\frac{1}{2}$x ____ x ____ = ____ The surface area of the pyramid is: ____ + ____ = ____ = ____ The surface area of the pyramid is: _____

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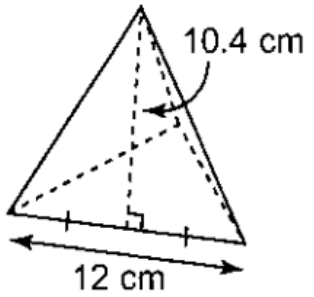
2. A triangular pyramid has 4 congruent faces. Find its surface area.



Four triangular faces have:

a base _____ and a height _____

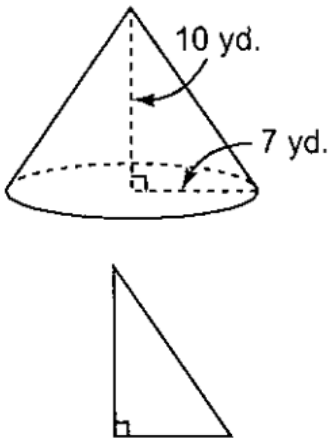
The area of the 4 faces is:

4 x $\frac{1}{2}$ x base x height = _____

= _____

The surface area of the pyramid is: _____

3. Find the slant height of this cone, to the nearest tenth of a unit.



Use the Pythagorean Theorem to find the slant height.

s^2 = _____ + _____

s^2 = _____ + _____

s^2 = _____

s = _____

The slant height is about: _____

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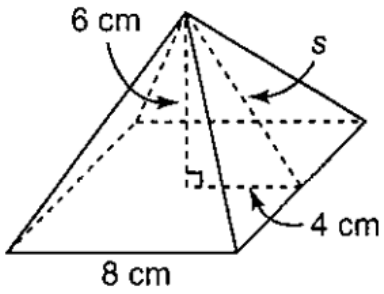
4. A wooden square pyramid is to be painted. The side length of the base is 8 cm and the height of the pyramid is 6 cm. To the nearest square centimetre, what is the area that will be painted?



Use the Pythagorean Theorem to find the slant height.

The slant height is: _____

The area of the base is: _____

The area of the 4 faces is: _____

The surface area of the pyramid is about: _____

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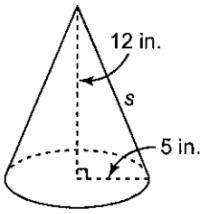
5. A cone-shaped hat is to be made with a radius of 5 in. and height of 12 in. To the nearest square inch, how much material will be needed for the hat?



The hat is a cone with no base.

Use the _____ to find the slant height.

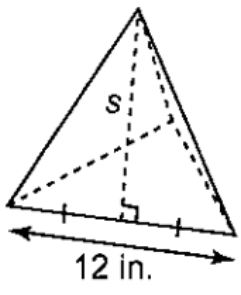
The slant height is:

SA = $\pi r s$

The surface area is about: _____

About _____ of material will be needed.

6. This triangular pyramid has 4 congruent faces. The surface area of this pyramid is 250 square inches. Find its slant height, to the nearest tenth of an inch.



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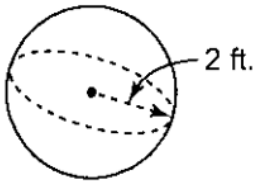
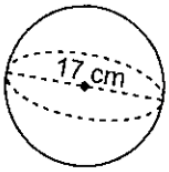
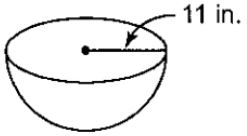
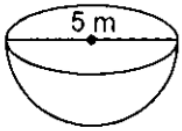
7. Find the surface area of each object, to the nearest square unit.

	$SA = 4\pi r^2$
	
	$SA = 3\pi r^2$ (half a sphere + area of circle ⇒ $2\pi r^2 + \pi r^2$)
	

8. A solid cork ball is covered in gold plating. It has a diameter of 14 cm.

   To the nearest tenth of a square centimetre, what is the surface area of gold plating?

9. A ball has a surface area of 28 square inches. Find the radius of the ball, to the nearest tenth of an inch.

   $SA = 4\pi r^2$