

READY, SET, GO!
Name \_\_\_\_\_
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Date \_\_\_\_\_

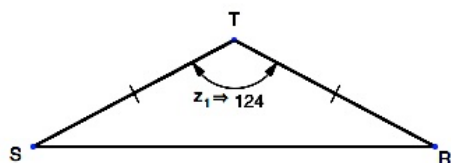
**READY**

Topic: Finding missing angles in a triangle

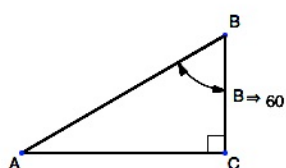
Use the given information and what you know about triangles to find the missing angles.

(All angle measures are in degrees.)

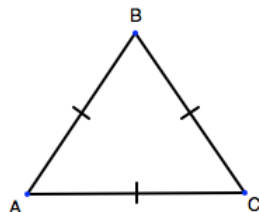
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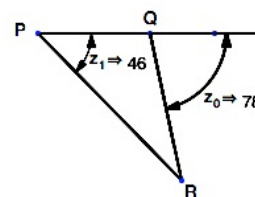
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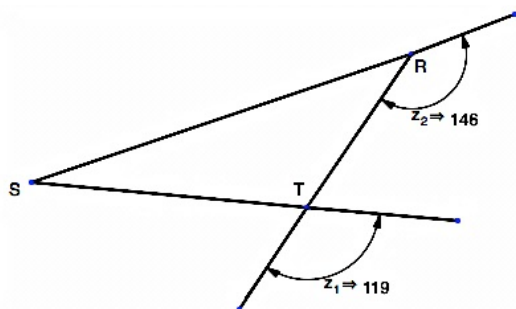
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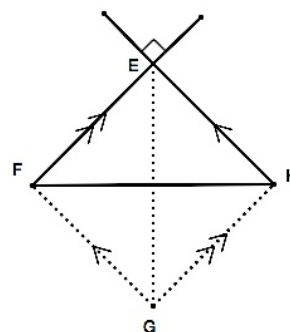
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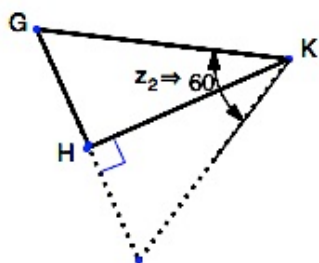
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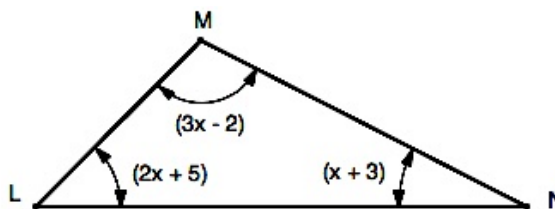
6.  $\overline{EG} \cong \overline{FH}$



7.



8.



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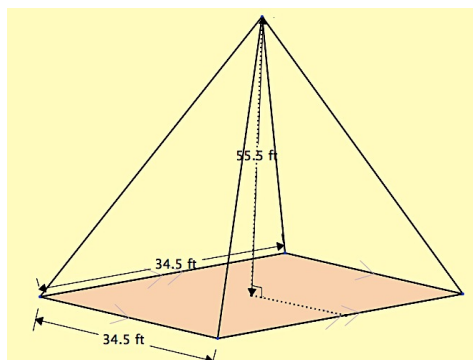
**SET**

Topic: Calculating the surface area and volumes of combined shapes.

**Answer the following questions about the Washington Monument.**

The picture at the right is of the Washington Monument in DC. The shaft of the monument is a square frustum. The bottom square measures 55 ft. on a side and the top square measures 34.5 feet. The top is a square pyramid.

9. Find the dimensions of the 4 triangular faces of the pyramid.  
 (Height is 55.5 ft)



<https://flickr/r/p/axqjPQ>

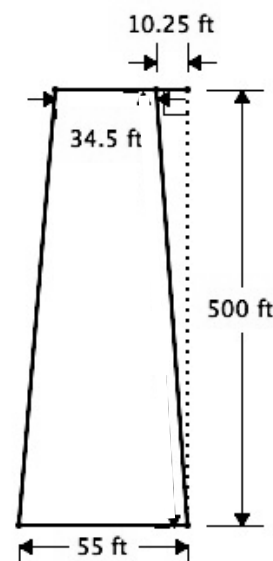
10. Find the area of each face of the pyramid.  
 11. Find the area of the 4 trapezoids that make the faces of the frustum.

The area of a trapezoid:  $A = \frac{b_1 + b_2}{2} h$

12. Find the total surface area of the Washington Monument.  
 13. Find the total volume of the Washington Monument.

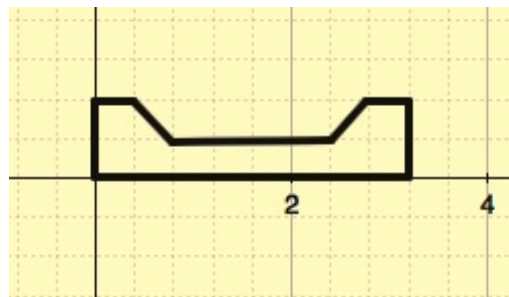
Volume of a square frustum:  $V = \frac{1}{3} h(a^2 + ab + b^2)$  where  $a$  and  $b$  are the side lengths of each square.

Volume of pyramid:  $V = \frac{1}{3} l^2 h$



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14. Draw a sketch of the three-dimensional object formed by rotating the figure about the  $x$ -axis.

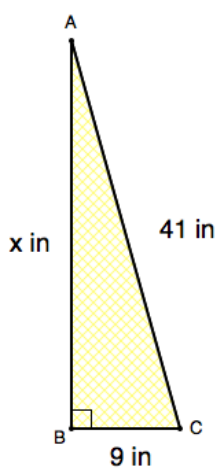


**GO**

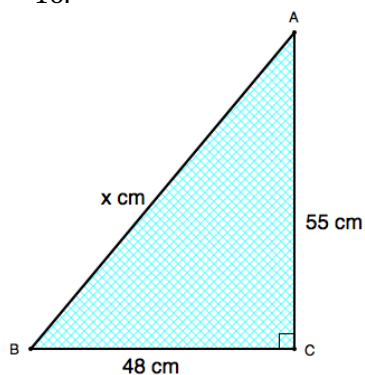
Topic: Solving for missing sides in a right triangle

Calculate the missing sides in the right triangle. Give your answers in simplified radical form.

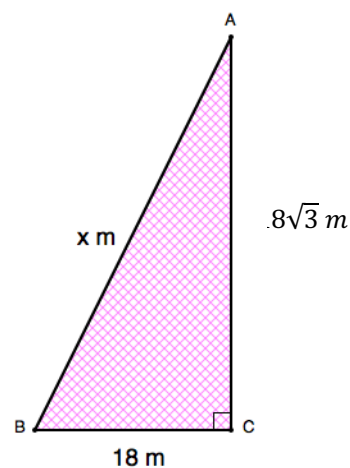
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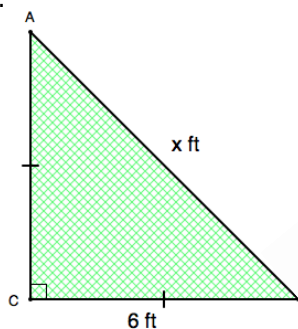
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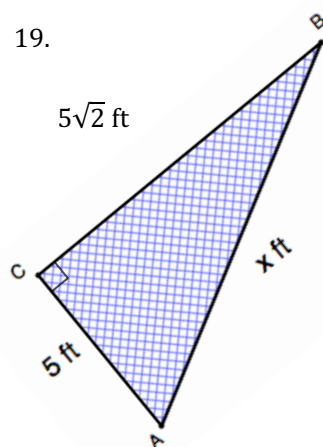
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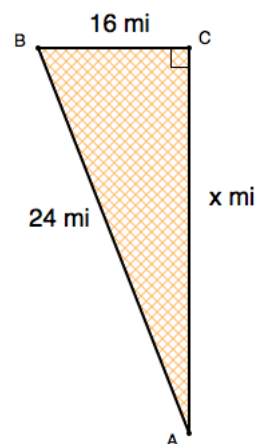
18.



19.



20.



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