

Name: _____ Period: _____ Date: _____

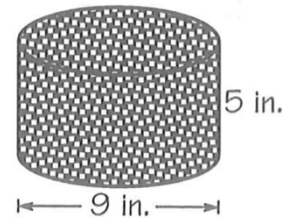
Measurement, Transformations, and Angles Practice

When solving area and volume problems, write the formula and show how you substituted in before solving. All answers should be rounded to the tenths place. Use the π button on your calculator instead of 3.14.

Make sure to show all work.

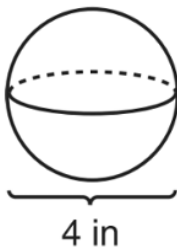
1. A circle has an area = 201.1 in^2 , what is the diameter?
2. The area of a trapezoid is 42cm^2 and the lengths of the bases are 6 cm and 8 cm. What is the height of the trapezoid?

3. Mr. Butterworth baked a cake in the shape of a cylinder. The cake had a diameter of 9 in. and a height of 5 in. He spread chocolate frosting over the entire cake except the bottom. How many square inches of the cake did he cover in frosting?

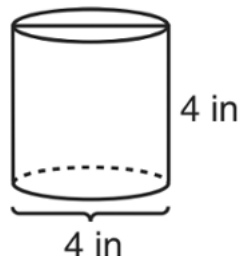


4. For the solids below, calculate the volumes and list the solids in order from smallest to largest volume.

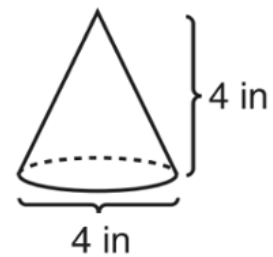
A.



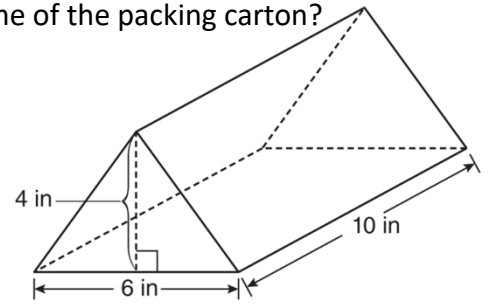
B.



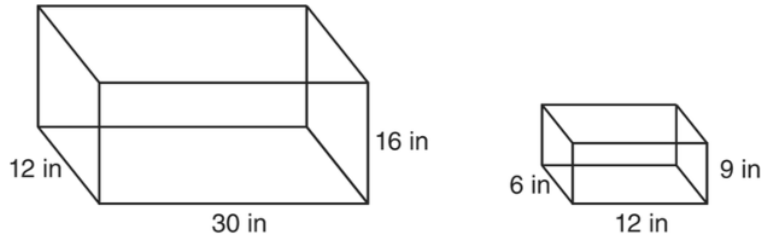
C.



5. A packing carton is in the shape of a triangular prism. What is the volume of the packing carton?

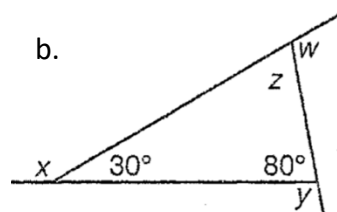
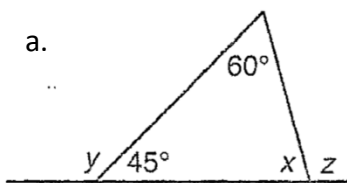


6. The diagram below represents Joe's two fish tanks.

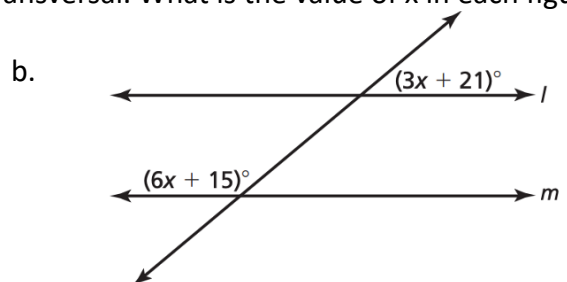
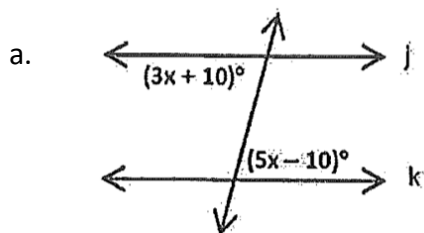


Joe's larger tank is completely filled with water. He takes water from it to completely fill the smaller tank. How many cubic inches of water will remain in the larger tank?

7. Find the values of the labeled angles in each figure below.



8. Both problems below are pictures of parallel lines cut by a transversal. What is the value of x in each figure?



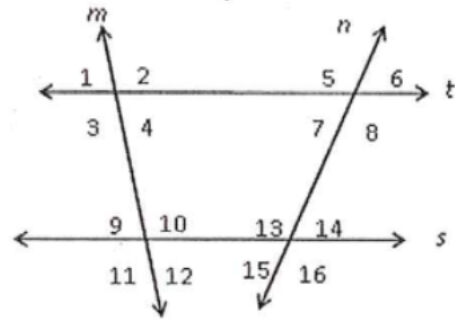
9. Find the angle measures asked for given the measures of angles 2 and 6.

$m\angle 2 = 97^\circ$ $m\angle 6 = 83^\circ$

$m\angle 3 = \underline{\hspace{2cm}}$ $m\angle 5 = \underline{\hspace{2cm}}$

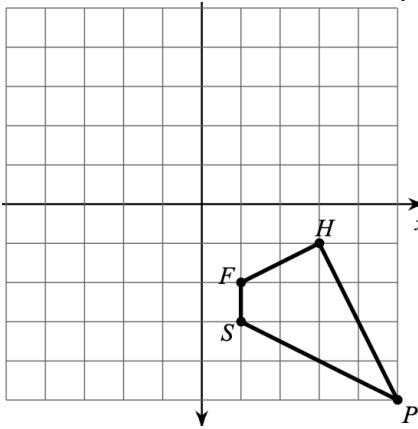
$m\angle 10 = \underline{\hspace{2cm}}$ $m\angle 7 = \underline{\hspace{2cm}}$

$m\angle 9 = \underline{\hspace{2cm}}$ $m\angle 16 = \underline{\hspace{2cm}}$

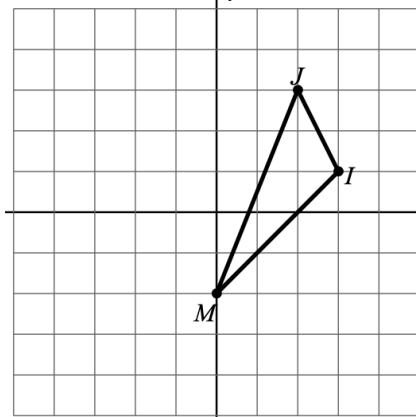


10. Perform the following transformations. Don't forget to label the vertices of your new figure.

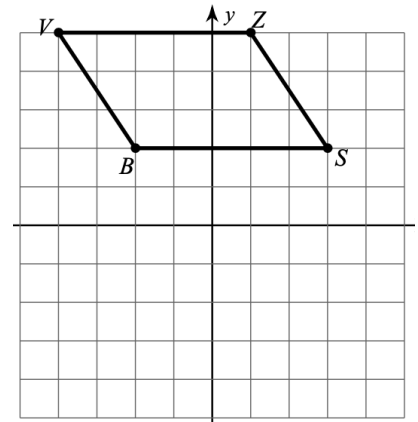
a. Translate 4 units left, 1 unit up



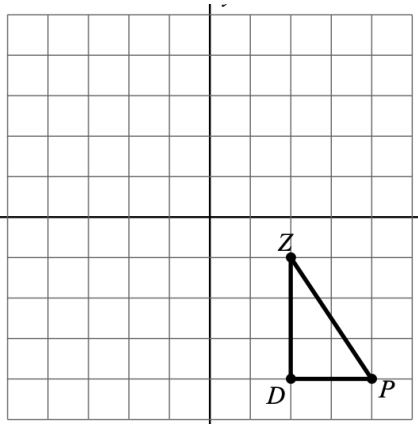
b. $(x, y) \rightarrow (x-3, y+2)$



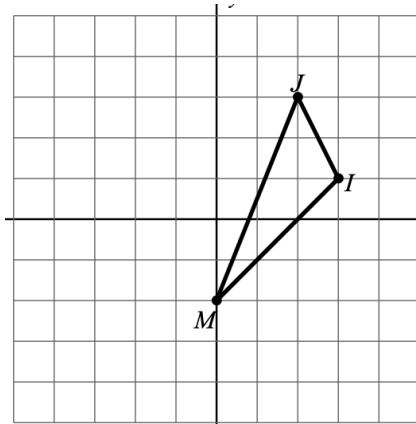
c. Reflect across the x-axis



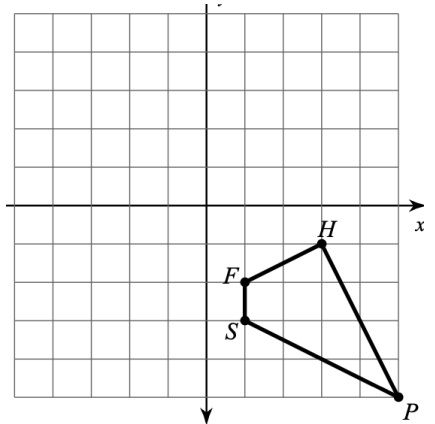
d. Rotate 180° clockwise



e. Reflect across the line $x=1$.



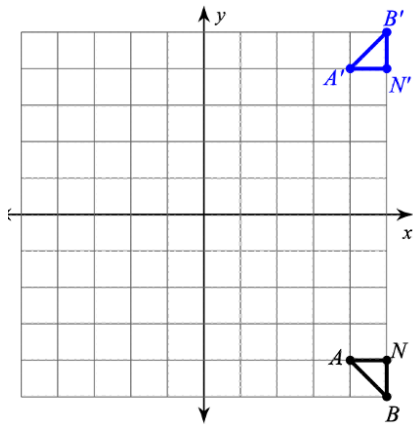
f. Rotate 90° counterclockwise



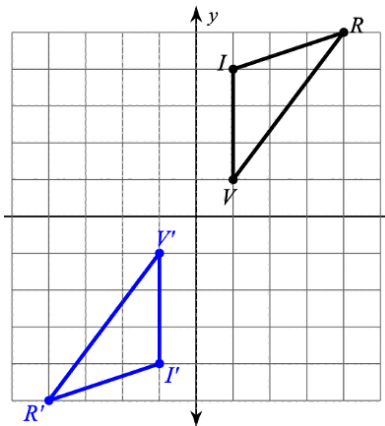
11. Triangle ABC is reflected over the y-axis and then translated 3 units down. How do the angle measures and lengths of the image compare to those of the preimage?

12. What transformation was performed in each of the graphs below?

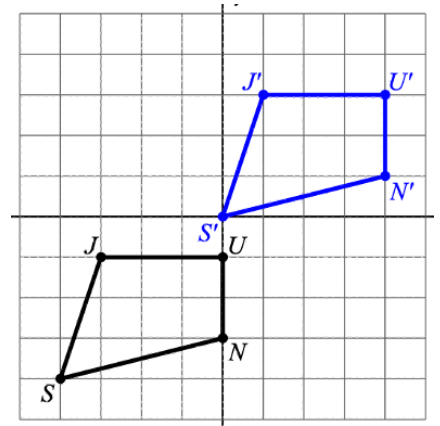
a.



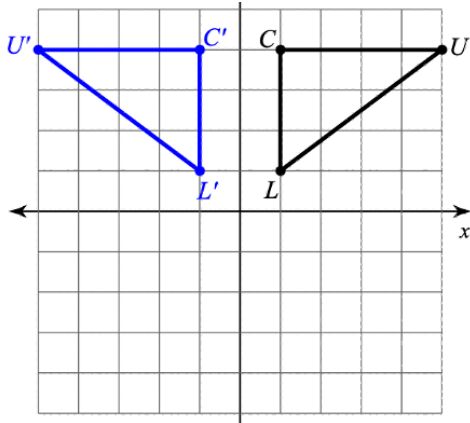
b.



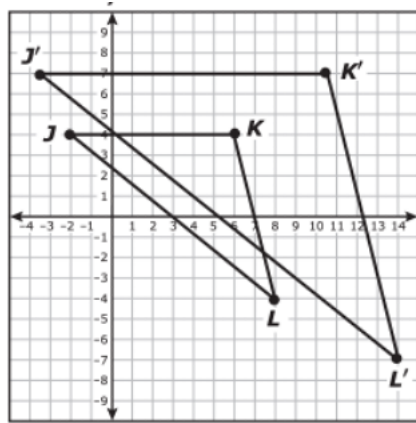
c.



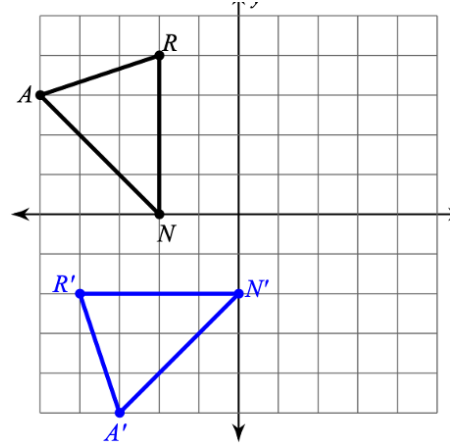
d.



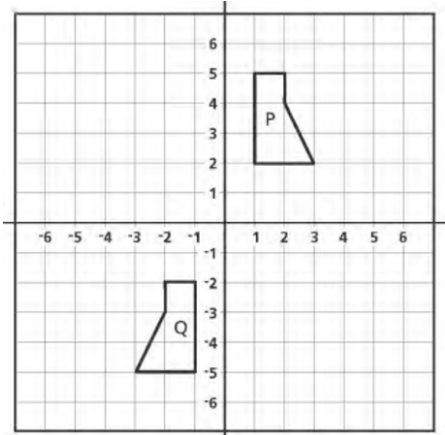
e.



f.



13. What sequence of 2 transformations will transform Figure P to Figure Q?



14. Triangle ABC is dilated by a factor of 3 to Triangle A'B'C'. How do the following aspects of the image compare to the pre-image?

- Angle measures
- Side lengths
- Area