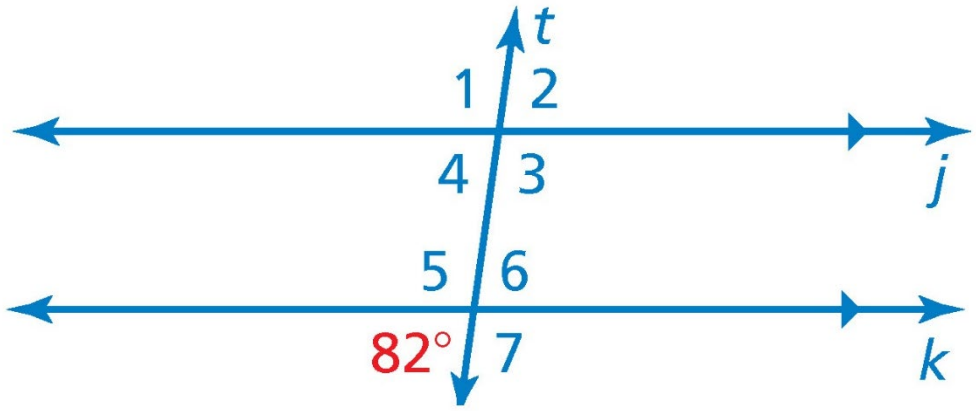
SEMESTER 1 FINAL

CHAPTER 3 & 8 (GEOMETRY) REVIEW

Review

Use the figure to find the measure of the angle. Explain your reasoning.



Possible explanations:

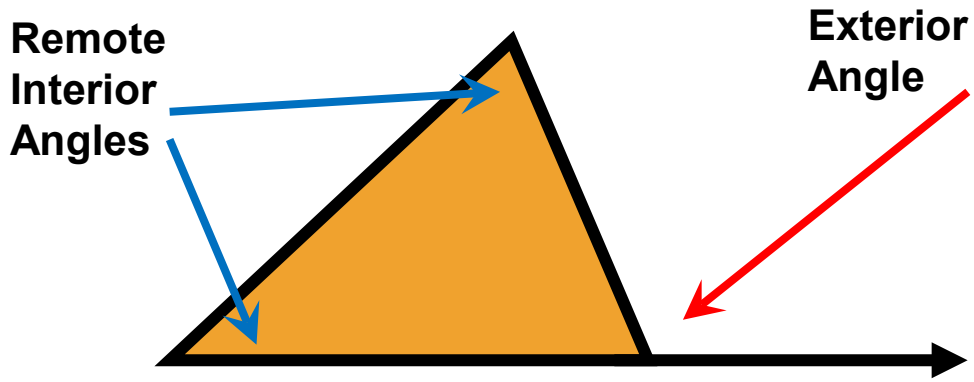
- Vertical Angles
- Supplementary Angles
- Corresponding Angles
- Supplementary Angles
- Alternate Interior Angles
- Alternate Exterior Angles
- (Or a combination of the above)

1) $m\angle 2 =$ _____ **. Why?** _____

2) $m\angle 6 =$ _____ **. Why?** _____

3) $m\angle 4 =$ _____ **. Why?** _____

4) $m\angle 1 =$ _____ **. Why?** _____



Triangle Interior Angles Sum

The ____ of all the _____ in a triangle is ____ .

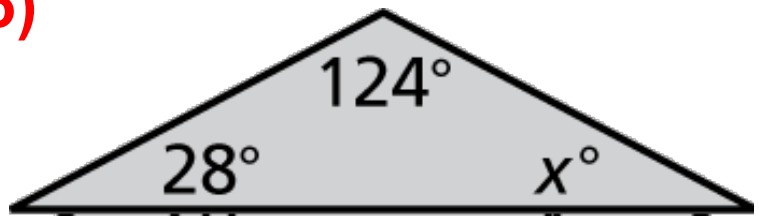
Triangle Exterior Angle Sum

The measure of an exterior angle of a triangle is _____ to the _____ of the _____ _____ _____ .

Review

Find the measures of the interior angles algebraically. SHOW WORK!

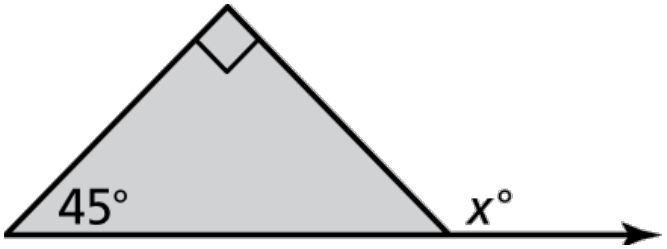
5)



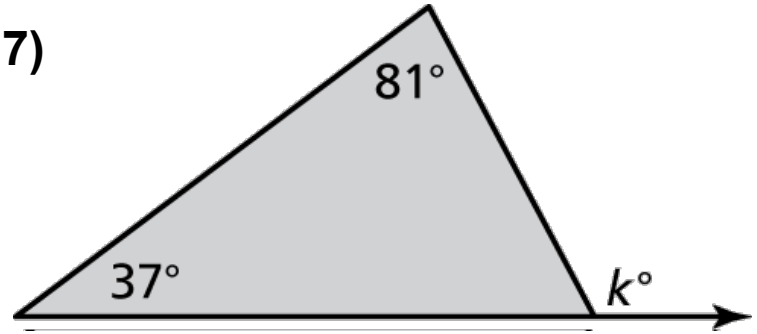
Practice

Find the missing angle algebraically.

6)



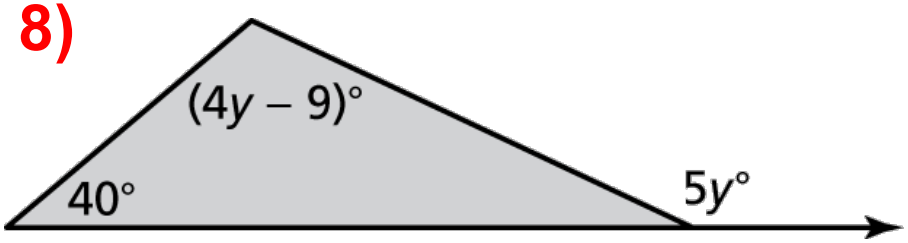
7)



Review

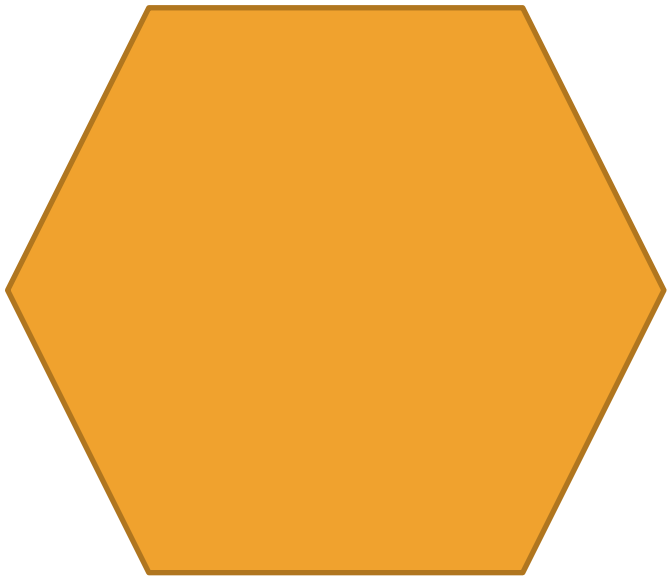
Find the measures of the exterior angle algebraically. SHOW WORK!

8)



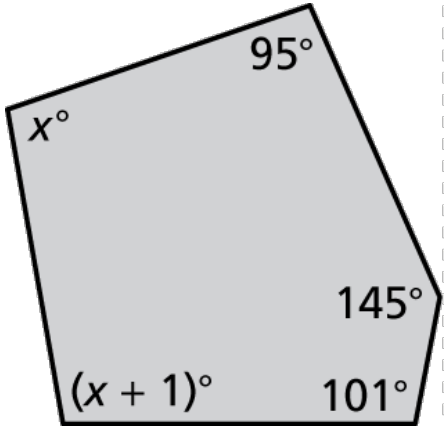
POLYGON INTERIOR ANGLES SUM

The formula to figure the sum of all the angles in a polygon with n sides is:

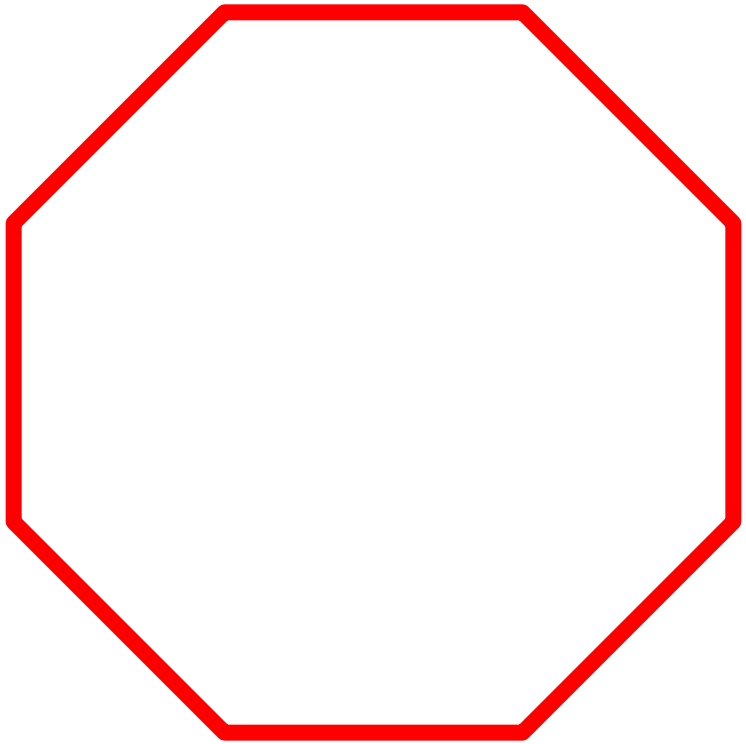


Find all the angles.

9)

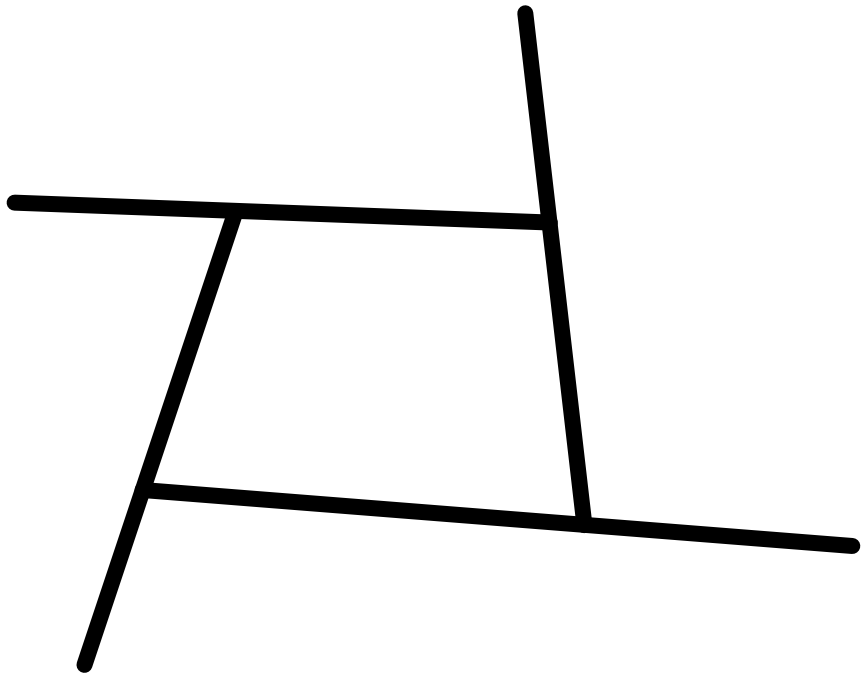


10) **A stop sign is in the shape of a regular octagon. What is the measure of each interior angle?**



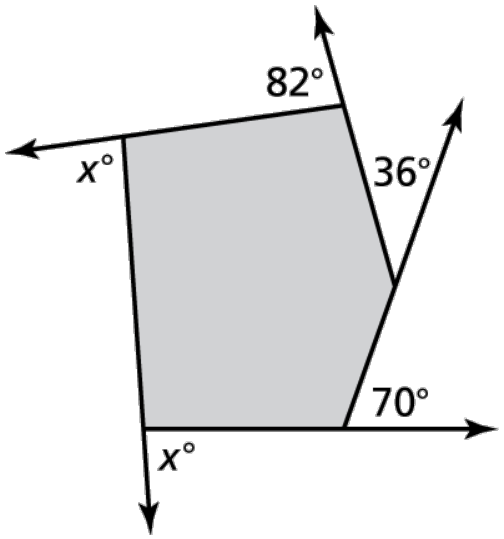
POLYGON EXTERIOR ANGLES SUM

The sum of all the exteriors angles in a polygon is _____.



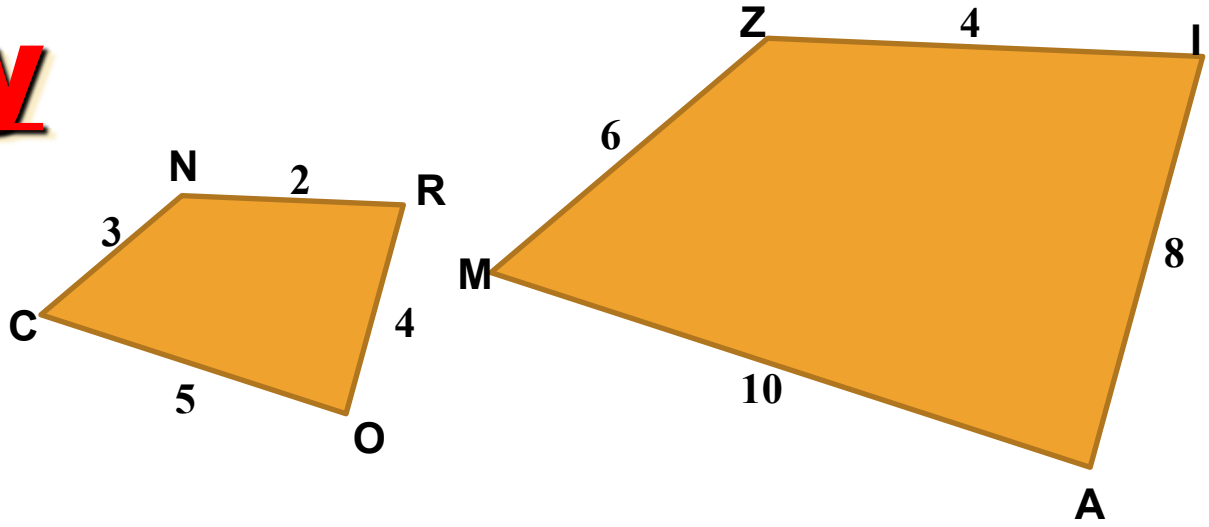
Find all the exterior angles.

11)



Similarity

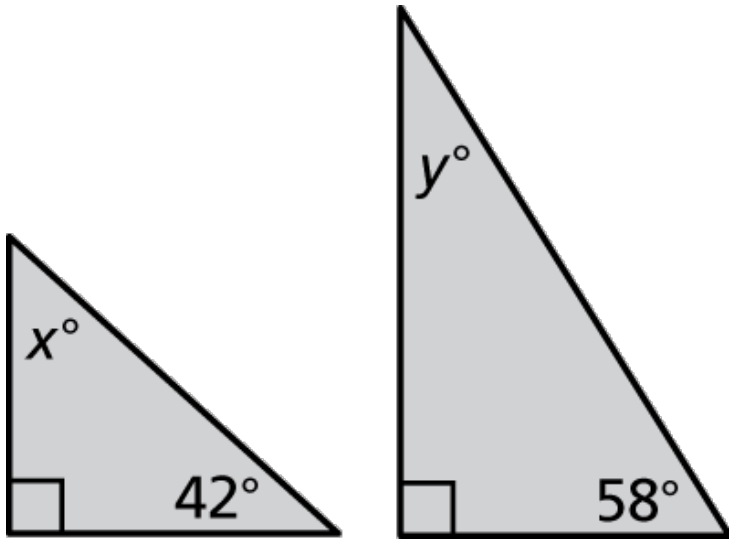
CORN ~ MAIZ



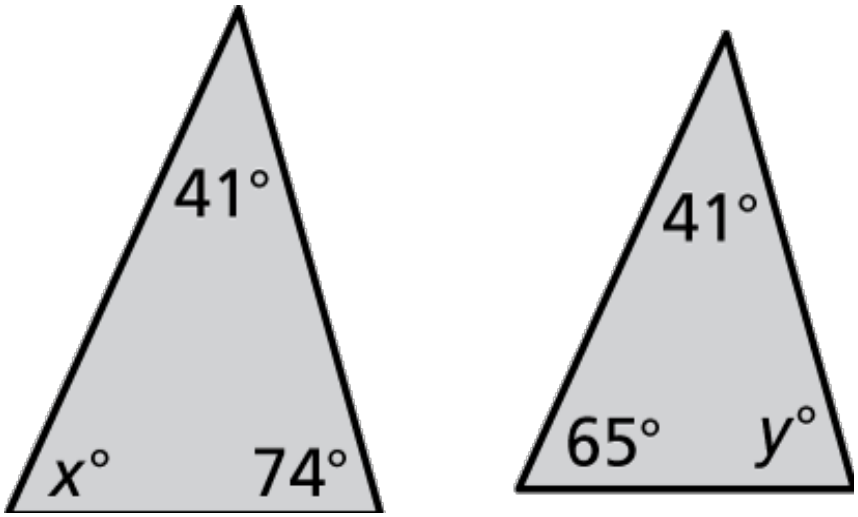
List 3 properties of similar shapes:

- Same shape, different size
- Corresponding angles are congruent
- Corresponding sides are proportional

12) Tell whether the triangles are similar. Explain.



13) Tell whether the triangles are similar. Explain.

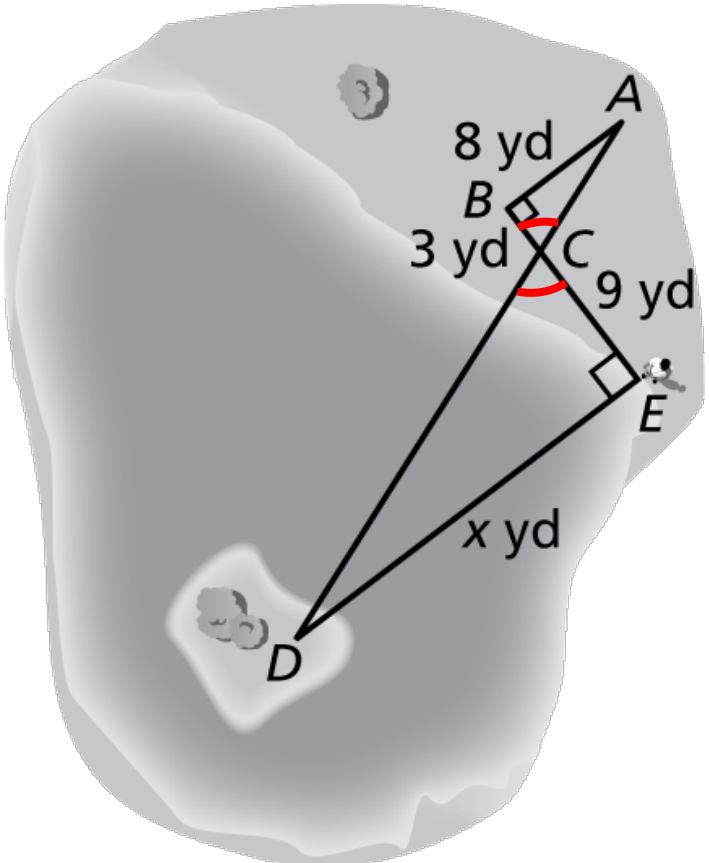


14) You and your friend are practicing for a rowing competition and want to know how far it is to an island in the Indian River Lagoon. You take measurements on your side of the lagoon and make the drawing shown.

a) Explain why $\triangle ABC$ and $\triangle DEC$ are similar.

Due to vertical angles, the triangles are similar since they have two pairs of congruent angles

b) What is the distance to the island?



$$\frac{3}{9} = \frac{8}{x}$$

$$x = 24\,yd$$

Formulas

Circumference =

Area of a Rectangle =

Area of a Parallelogram =

Area of a Triangle =

Area of a Trapezoid =

Area of a Circle =

Formulas

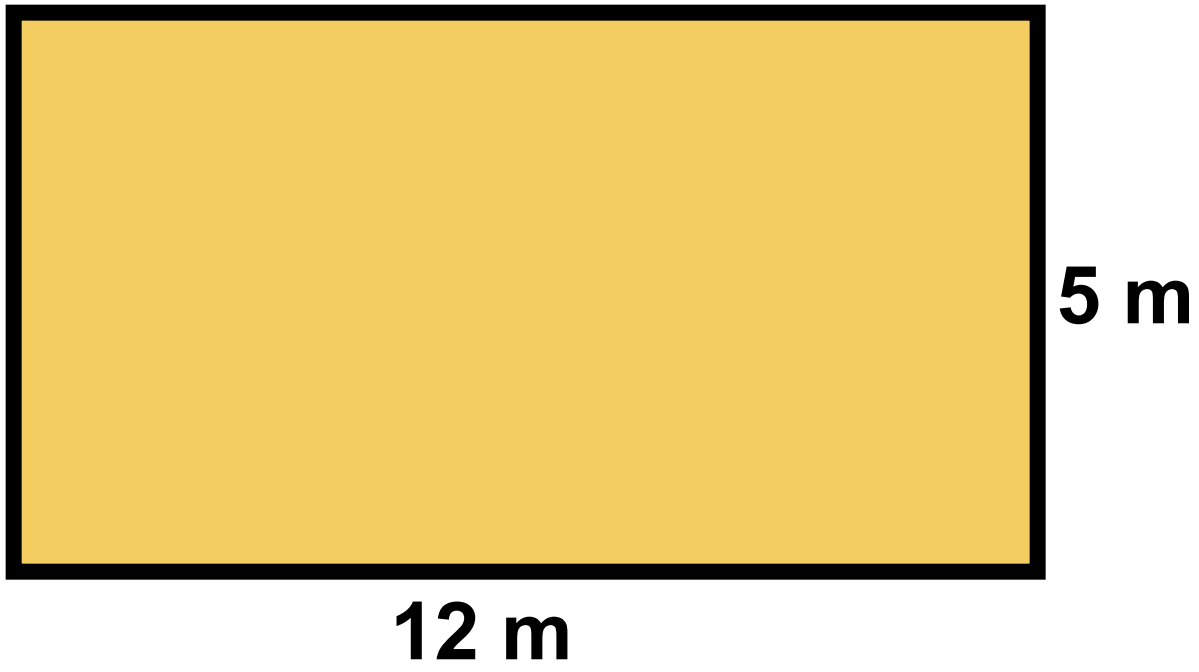
Volume of a Prism =

Volume of a Cylinder =

Volume of a Cone=

EXAMPLE

Area of a Rectangle

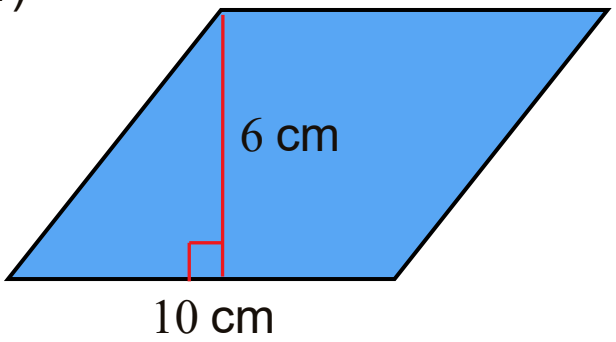


EXAMPLE

Find the missing measurement

PRACTICE:

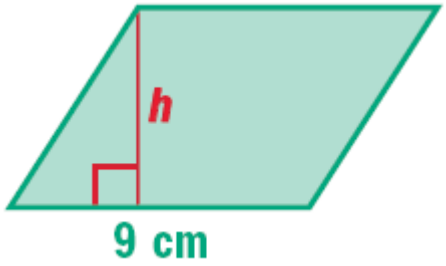
1)



PRACTICE:

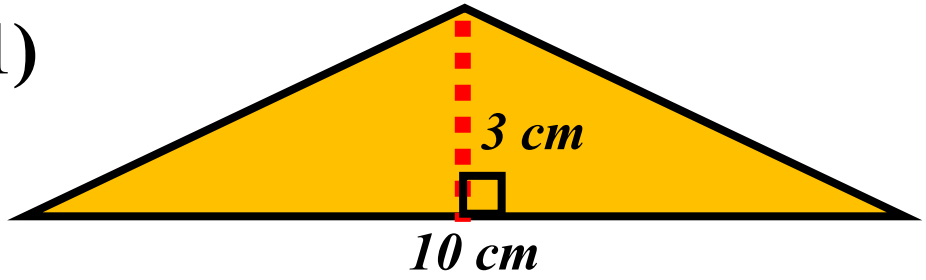
3) Make an equation and then solve for the missing value.

A = 54 cm^2

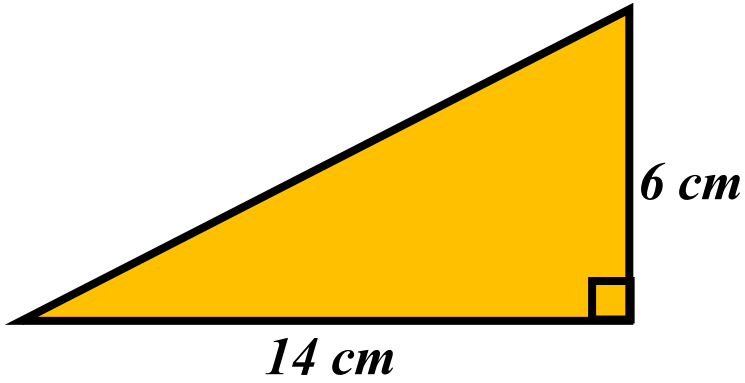


Find the area. Show complete work.

1)

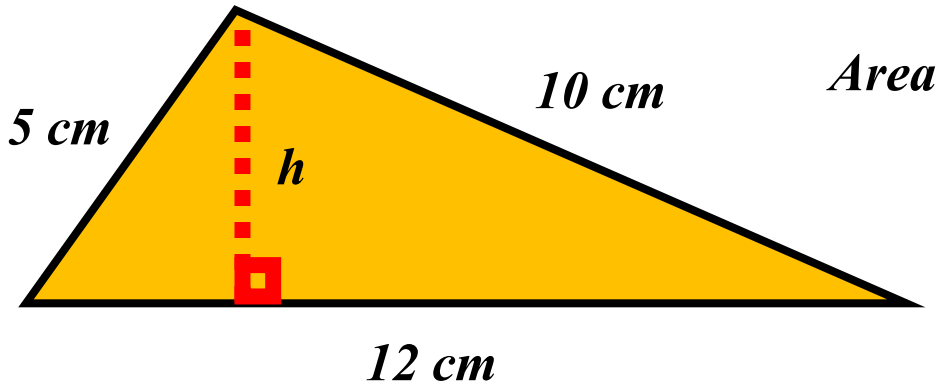


2)



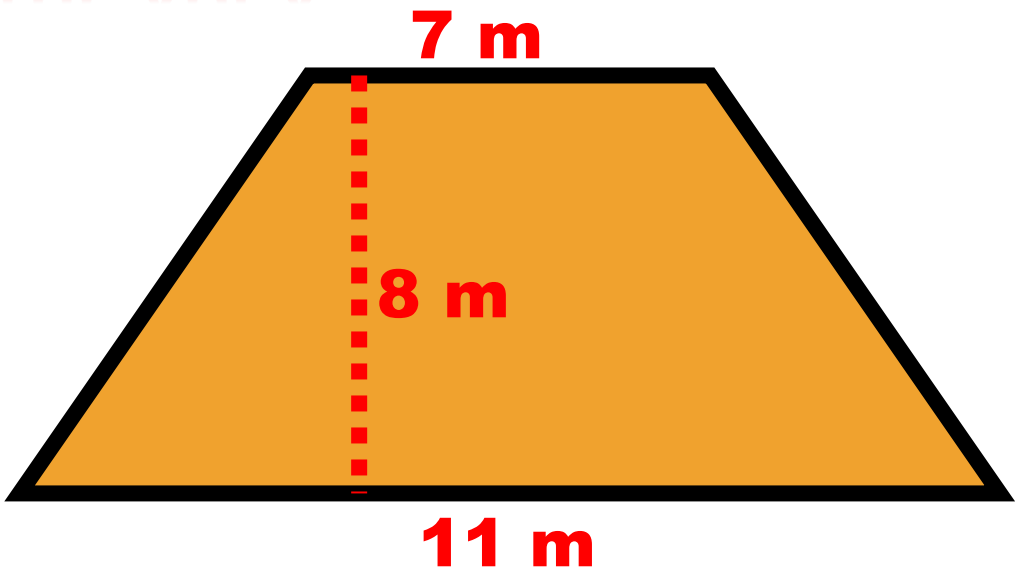
Find the missing measurement. Show complete work.

4)



Area = 24 cm²

5) FIND THE AREA.

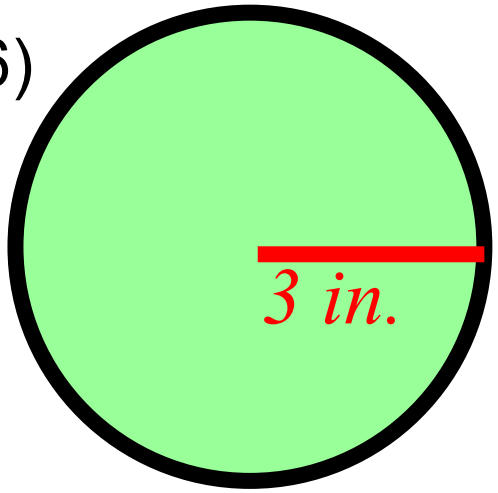


PRACTICE

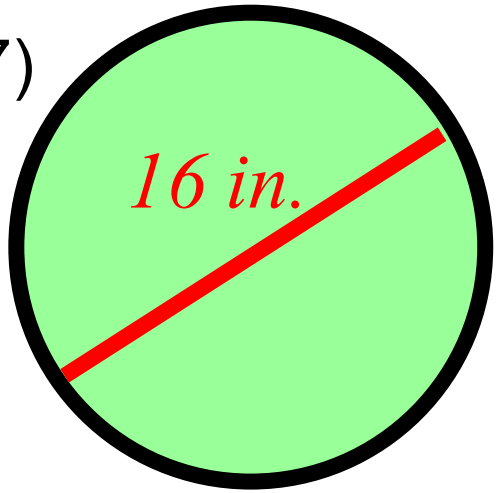
- Write the formula
- Plug-in the given information
- Solve

Find the circumference of the circle in which $\pi = 3.14$.

6)



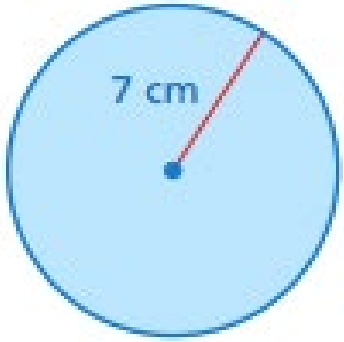
7)



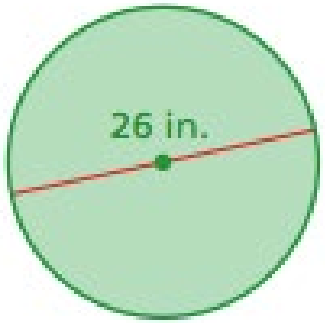
Area of a Circle

- Find the measure of the radius
- Write the formula
- Plug-in the known information
- Solve

8)

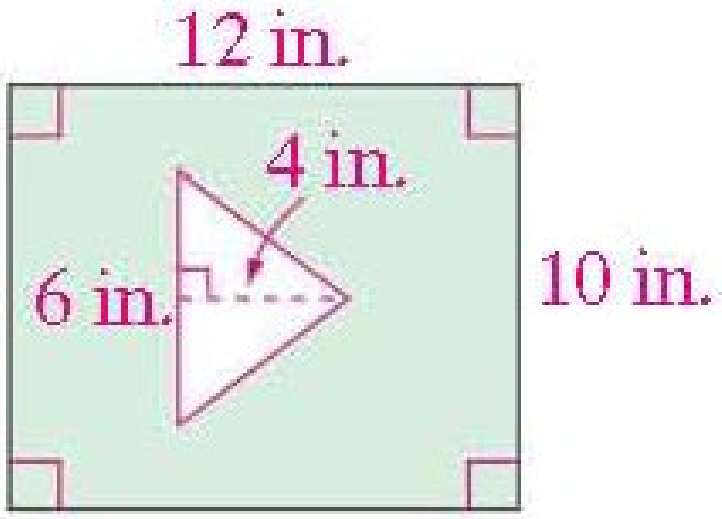


9)



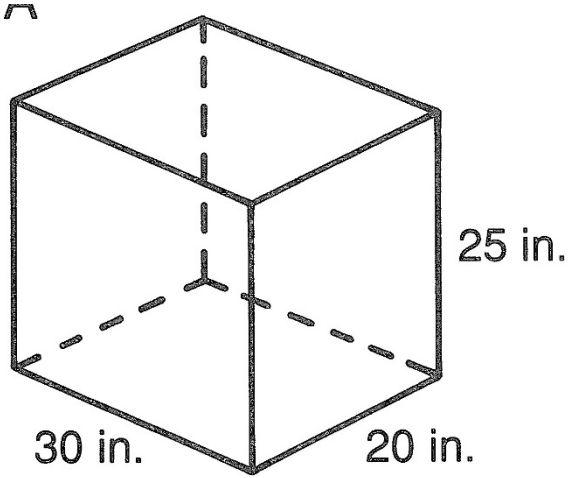
Find the Area

10)



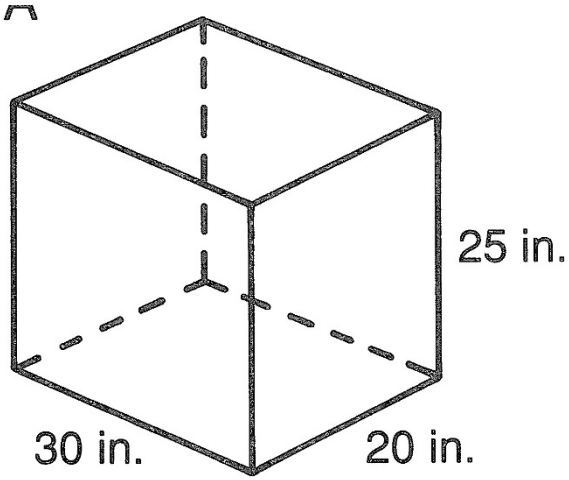
PRACTICE

11) Find the volume



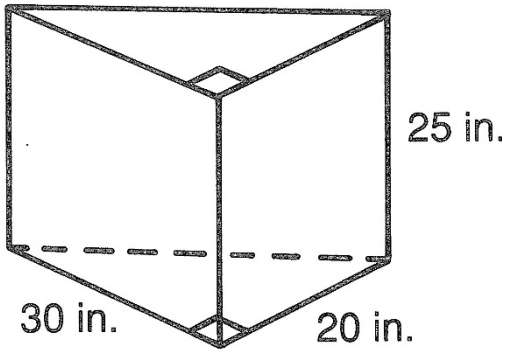
PRACTICE

12) Find the surface area



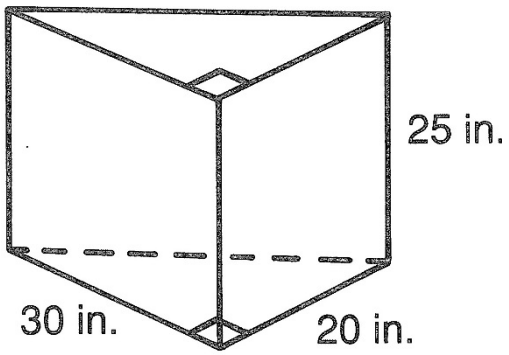
PRACTICE

14) Find the volume



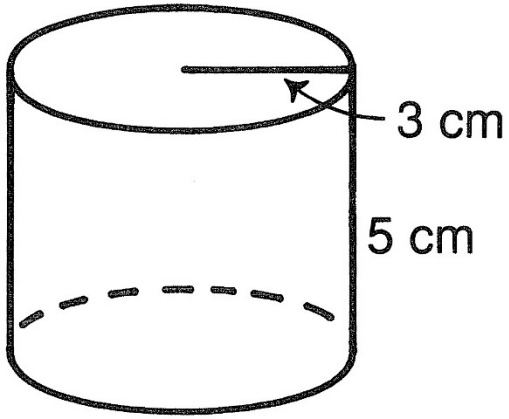
PRACTICE

15) Find the surface area



PRACTICE

16) Find the volume



PRACTICE

17) Find the volume