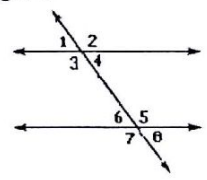


Math 8 Unit 4 Review - Angles and Volume

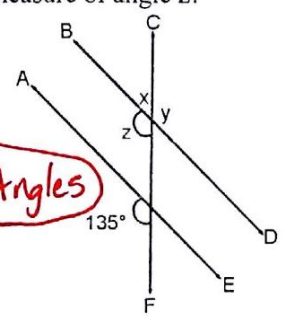
1. Identify a pair of **corresponding angles** in the figure.



$\angle 1 + \angle 6$
 $\angle 2 + \angle 5$
 $\angle 3 + \angle 7$
 $\angle 4 + \angle 8$

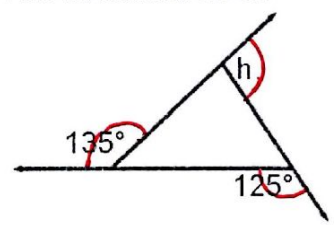
Any of these.

2. What is the measure of angle z?



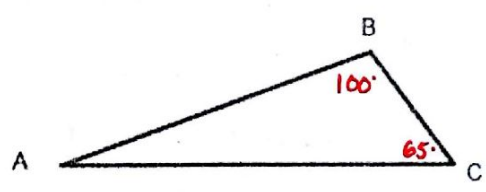
$\angle 135^\circ$
 Corresponding Angles

3. Find the measure of $\angle h$.



Exterior Angles = 360°
 $135 + 125 + h = 360$
 $\angle h = 100^\circ$

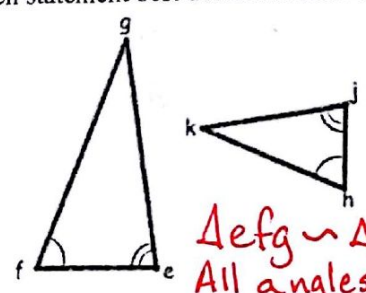
4. Two interior angles of triangle ABC measure 65° and 100° . What is the measure of $\angle A$?



180
 $- 100$
 $- 65$
 $\hline 15$

$\angle A = 15^\circ$

5. Which statement best describes these two figures?:



$\triangle feg \sim \triangle hjk$,
 All angles are congruent.

6. Write the formulas for the volumes of each shape:

A. Cone: $V = \frac{1}{3} \pi r^2 h$

B. Cylinder: $V = \pi r^2 h$

C. Sphere: $V = \frac{4}{3} \pi r^3$

7. A pringles can has a **diameter** of 12 centimeters. If the height of the can is 25 centimeters, what is the volume of the can?

1. Write the formula:

$V = \pi r^2 h$

2. Replace with Numbers

$V = 3.14 \cdot 6^2 \cdot 25$

3. Solve & label

$V = 2826 \text{ cm}^3$

8. Find the volume of the cone.

1. Write the formula:

$$V = \frac{1}{3} \pi r^2 h$$

2. Replace with Numbers

$$V = \frac{1}{3} \cdot 3.14 \cdot 6^2 \cdot 15$$

3. Solve & label

$$V = 565.2 \text{ m}^3$$



9. A globe has a radius of 3 feet. What is the volume of the globe?

1. Write the formula:

$$V = \frac{4}{3} \pi r^3$$

2. Replace with Numbers

$$V = \frac{4}{3} \cdot 3.14 \cdot 3^3$$

3. Solve & label

$$V = 113.04 \text{ ft}^3$$

10. Find all three missing exterior angles.

Then, find the sum of the exterior angles.

$$m\angle a = 180$$

$$-72$$

$$\angle a = 108^\circ$$

$$m\angle b =$$

$$+72$$

$$+57$$

$$\angle b = 129^\circ$$

$$m\angle c = 180$$

$$-57$$

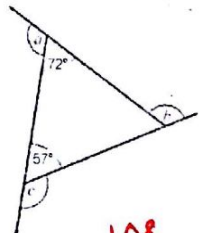
$$\angle c = 123^\circ$$

$$\text{Sum of exterior angles } +108$$

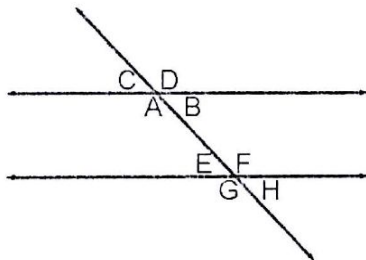
$$+129$$

$$+123$$

$$= 360^\circ$$



11. Give an example of the following pairs of angles.



- A) Corresponding $\angle A + \angle G$, $\angle B + \angle H$, $\angle C + \angle E$, $\angle D + \angle F$
any of these
- B) Alternate Interior $\angle A + \angle F$ or $\angle B + \angle E$
- C) Alternate Exterior $\angle C + \angle H$ or $\angle D + \angle G$
- D) Same-Side Interior $\angle A + \angle E$ or $\angle B + \angle F$

Name: _____

ID: A

12. The $m\angle H = 35^\circ$, Fill in the measure of all the angles. ($\frac{1}{2}$ point each)

Show your work.

$m\angle A = 145^\circ$
 $m\angle B = 35^\circ$
 $m\angle C = 35^\circ$
 $m\angle D = 145^\circ$

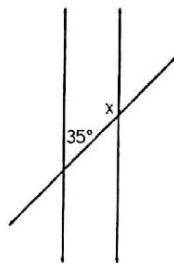
$m\angle E = 35^\circ$
 $m\angle F = 145^\circ$
 $m\angle G = 145^\circ$
 $m\angle H = 35^\circ$

13. Identify the type of angle. Find the measure of $\angle x$.

A. Name of angle pair:

SSI

B. $\angle x = 145^\circ$



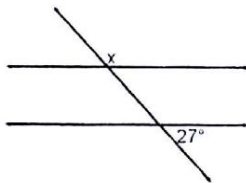
15. Find the measure of $\angle a$. Show your work.

90
 $+ 25$
 115
 $\angle a = 115^\circ$

14. Find the measure of $\angle x$.

A. Show your work:

B. $\angle x = 153^\circ$



16. Find all the missing angles. Show your work.

$m\angle w = 180 - 52 = 128^\circ$
 $m\angle x = 180 - 67 = 113^\circ$
 $m\angle y = 67 + 52 = 119^\circ$
 $m\angle z = 180 - 67 - 52 = 61^\circ$

- 17.

a. Are the triangles similar? YES or NO

b. Explain how you know:

corresponding Angles are congruent

(ex. "corresponding sides are proportional")

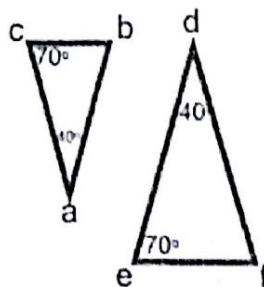
(ex. "corresponding angles are congruent")

c. Write a similarity statement:

$\triangle abc \sim \triangle def$

(ex. " $\triangle STU \sim \triangle XYZ$ ")

Show your work.

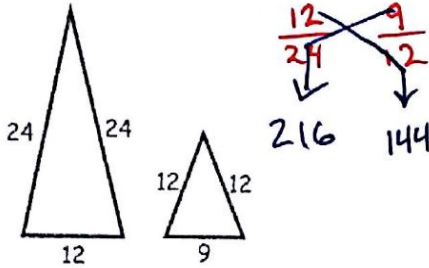




18.

- a. Are the triangles similar? YES or **NO**
 b. Explain how you know:
corresponding sides are not proportional
 (ex. "corresponding sides are proportional")
 (ex. "corresponding angles are congruent")
 c. Write a similarity statement:

(ex. " $\triangle STU \sim \triangle XYZ$ ")

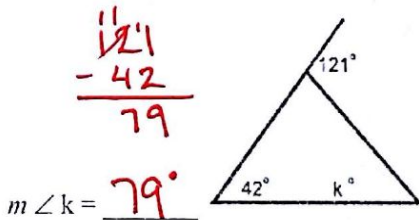


Show your work.

19. A can of chicken noodle soup (a cylinder) has a radius of 2 inches and a height of 6 inches. What is the volume of the can?

1. Write the formula: $V = \pi r^2 h$
 2. Replace with Numbers
 $V = 3.14 \cdot 2^2 \cdot 6$
 3. Solve & label
 $V = 75.36 \text{ in}^3$

20. Find the measure of $\angle k$. Show your work.



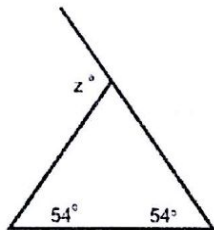
21.

1. Find the sum of the two given angles.

$54 + 54 = 108^\circ$

2. Find the missing angle.

$m\angle z = 108^\circ$



3. How are the two answers related?

The sum of 2 interior angles is equal to the opposite exterior angle.