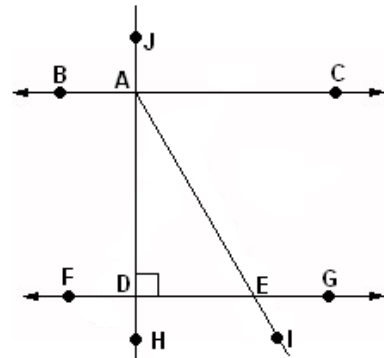


Simplify all answers and show your work!

- The sum of two supplementary angles is _____ degrees.
- The sum of two complementary angles is _____ degrees.
- For corresponding angles or alternate interior/exterior angles to be congruent, a transversal must cross what kind of lines? _____
- Congruent triangles are the same _____ and have the same _____.
- What is the complement of a 24° angle? _____
- What is the supplement of a 24° angle? _____

Use the figure to the right to answer problems 7 - 13. Assume that $\overline{BC} \parallel \overline{FG}$ and $m\angle ADE = 90^\circ$.

- List two right angles. _____
- List a pair of vertical angles. _____
- If $m\angle CAE = 64^\circ$, find the measures of the following.
 - $m\angle AED =$ _____
 - $m\angle EAD =$ _____
 - $m\angle GEI =$ _____
 - $m\angle AEG =$ _____
 - $m\angle FDH =$ _____
 - $m\angle JAB =$ _____
 - $m\angle DEI =$ _____

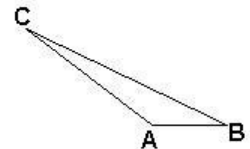


Fill in the blanks with corresponding, vertical, alternate exterior, alternate interior, complementary, or supplementary.

- $\angle AED$ and $\angle GEI$ are _____ angles.
- $\angle DEA$ and $\angle AEG$ are _____ angles.
- $\angle CAE$ and $\angle EAD$ are _____ angles.
- $\angle CAE$ and $\angle GEI$ are _____ angles.

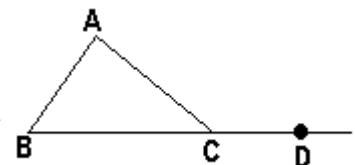
Given $\triangle ABC$ below where $m\angle BCA = 12^\circ$ and $m\angle BAC = 121^\circ$, answer problems 14 – 16.

- Find $m\angle ABC =$ _____.
- Which side is the longest? _____
- Which side is the shortest? _____



Given the figure to the right where $m\angle ACB = 2x$, $m\angle ABC = 4x$, and $m\angle ACD = 6x$, find the following.

- $x =$ _____
- $m\angle ACB =$ _____
- $m\angle ABC =$ _____
- $m\angle ACD =$ _____
- $m\angle BAC =$ _____



Determine whether or not it is possible to make a triangle having the given side lengths. (Yes or No)

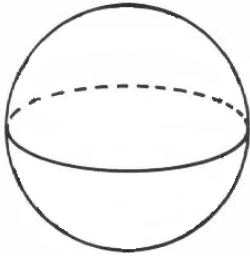
18. 3, 7, 6 _____ 19. 6.4, 8.9, 2.4 _____ 20. 12, 17, 5.1 _____

19. The measure of $\angle A$ is $(3x + 15)^\circ$ and the measure of $\angle B$ is $(4x - 27)^\circ$. If angles A and B are supplementary angles, find the following:

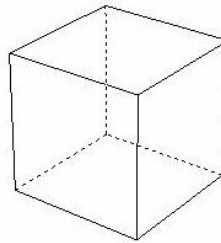
- a) $x =$ _____ b) $m\angle A =$ _____ c) $m\angle B =$ _____

20. Find the volumes below:

- a) Sphere having a diameter of 12 inches.



- b) Cube having an edge of 12 inches.



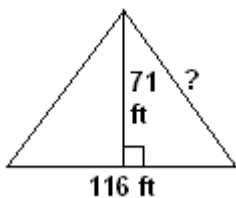
- c) Which has the larger volume?

21. Le Grande Louvre is the glass pyramidal entrance to the Louvre museum in Paris, France. The base of the pyramid is a square with sides measuring 116 ft, and the perpendicular height of the pyramid is 71 ft.

- a) What would the volume of the inside of the pyramid be?



- b) What is the slant height of the pyramid?



- c) Approximately how many feet² of glass were used to build the pyramid? (The four sides only; **not** the bottom!)

22. A teepee has the shape of a cone. One teepee has a diameter of 10 feet and a slant height of 15 feet.

- a) How much canvas is needed to cover the teepee?(Note: Don't include the bottom!)

- b) If canvas is \$14.99 per foot, how much will the canvas for the teepee cost?