

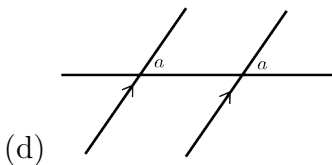
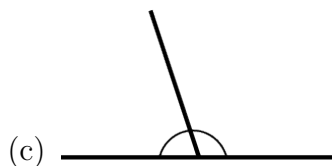
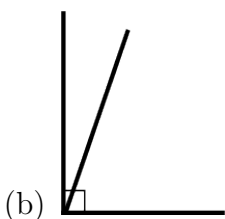
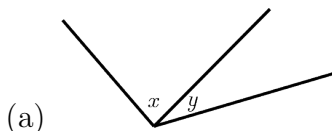


Grade 6 Math Circles

March 28/29/30, 2023

All About Angles - Problem Set

1. Classify the following angles:



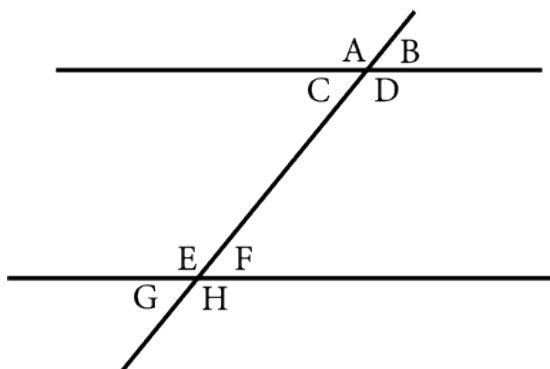
2. What is the

- (a) Supplementary angle to 32° ?
- (b) Complementary angle to 32° ?
- (c) Supplementary angle to 79° ?
- (d) Supplementary angle to 180° ?

3. Two angles are complementary to each other. One is 12° larger than the other. What are the angles?



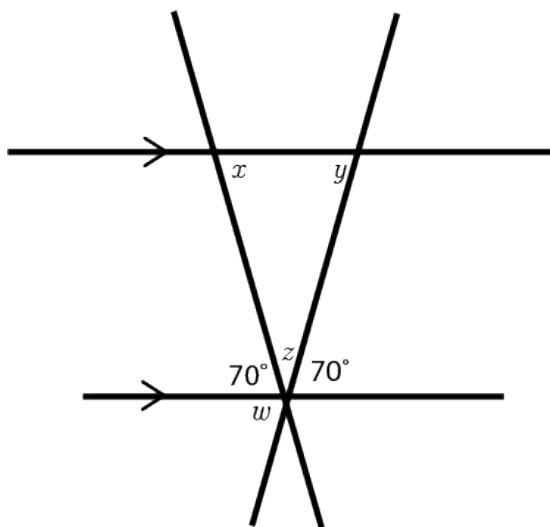
4. Consider the following diagram:



- (a) List all the pairs of supplementary angles
- (b) How many angles need to be known if you want to determine *all* the angles in the diagram?

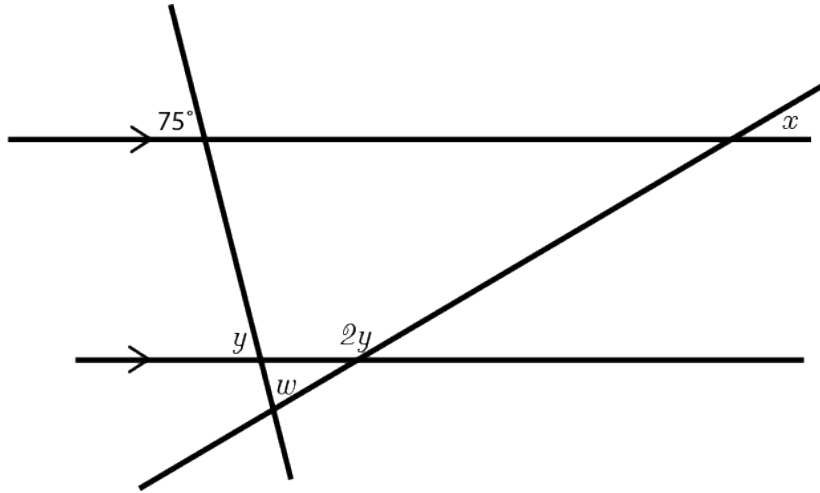
5. Determine the missing angles using angle properties:

a)



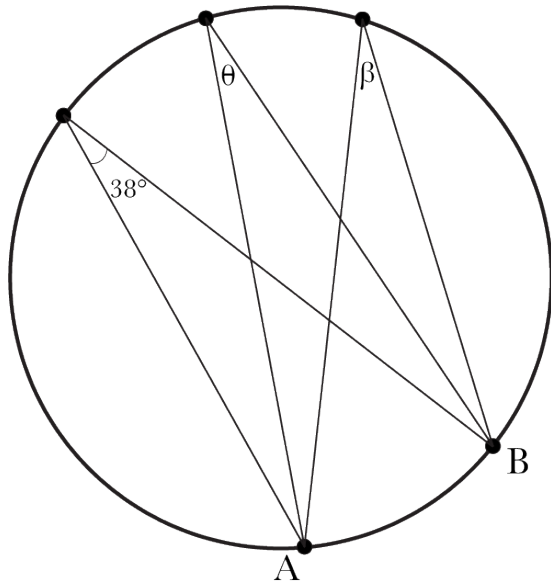


b)



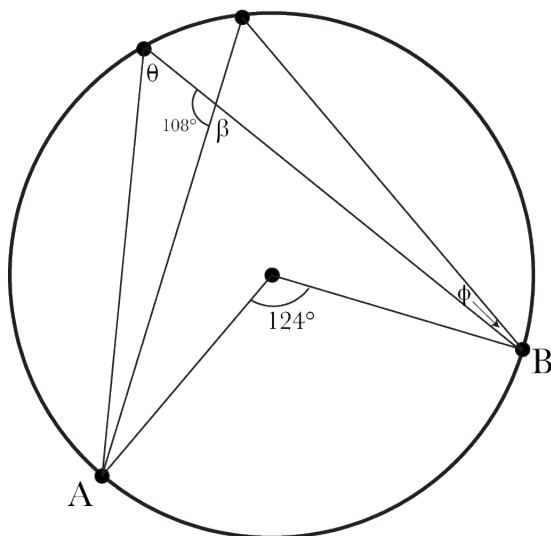
6. Determine the missing angles using angle properties:

a)





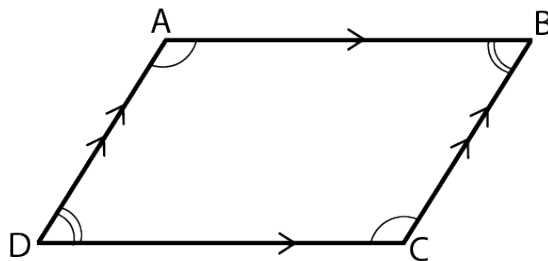
b)



7. Draw the following angles inside of a circle:

- (a) An inscribed angle with a related central angle of 80° .
- (b) A central angle with a related inscribed angle of 63° .
- (c) An inscribed angle from the diameter whose vertex is equidistant from points A and B.

8. (a) Consider the parallelogram below. Can you draw a line to break up the shape into two triangles?



(b) Use angle properties and interior angle rules to prove that the sum of the interior angles in a parallelogram is 360° .



9. Determine the missing angles using angle and shape properties:

