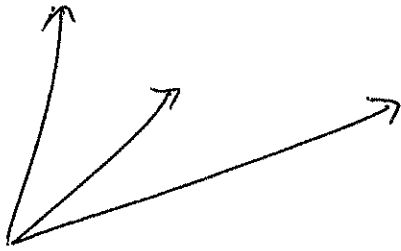


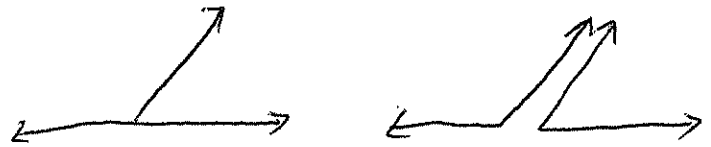
Objectives: Identify adjacent, vertical, complementary, and supplementary angles. Find measures of pairs of angles.

Follow instructions to draw and discover angle relationships.

1) **Adjacent Angles:** same vertex and share a ray.



4) **Supplementary Angles:** 2 angles whose sum = 180°. Don't have to be adjacent.

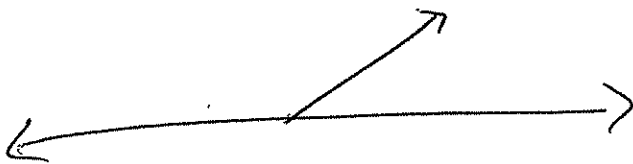


adj.

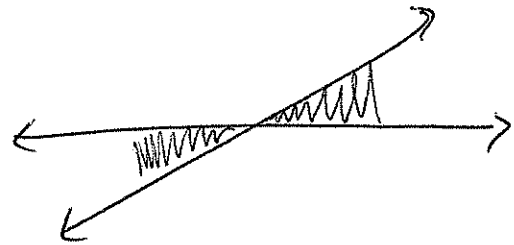
non-adj.

• supplement of an angle: 180 - angle

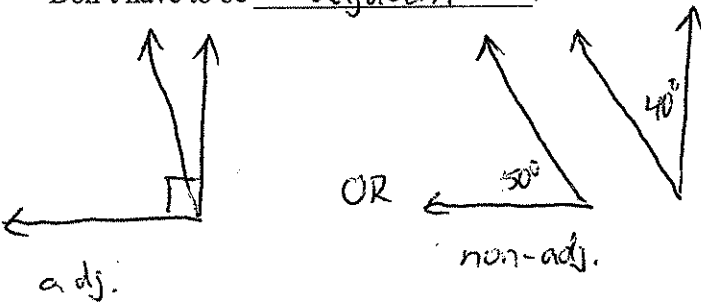
2) **Linear Pair:** 2 adjacent angles whose non-common sides are opposite rays.



5) **Vertical Angles:** 2 non-adjacent angles formed by 2 intersecting lines.



3) **Complementary Angles:** 2 angles whose sum = 90°. Don't have to be adjacent.



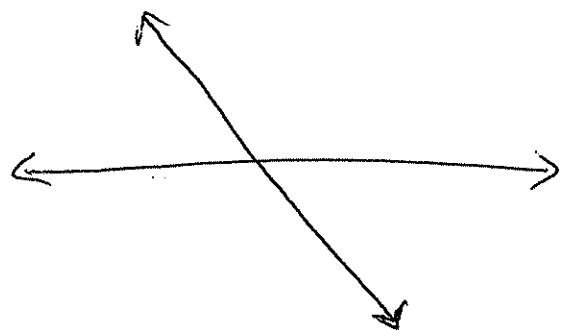
adj.

OR

non-adj.

• complement of an angle: 90 - angle

6) **Vertical Angle Theorem:** vertical angles are ≅ measure & s



EX 1: An angle is 10° more than 3 times its **complement**. Find the measure of the angle and its complement.

Eq: $x = 10 + 3(90 - x)$

$x = 10 + 270 - 3x$

$x = 280 - 3x$

$+3x \qquad +3x$

$\frac{4x}{4} = \frac{280}{4}$

$x = 70$

$90 - 70$

20

angle = 70° , complement = 20°