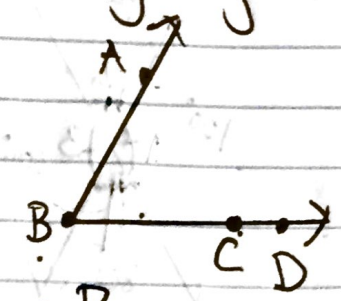
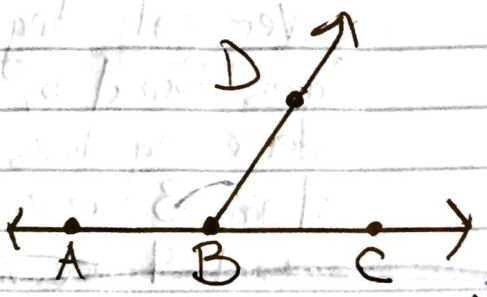
G2 Notes- Lines + Angles

Essential Question- What are the names of angles and what are their relationships?

Naming Angles

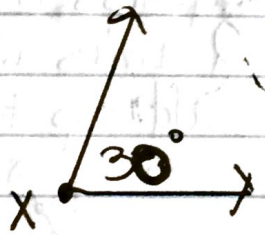


$\angle B$
$\angle ABC$
$\angle CBA$
↖ vertex

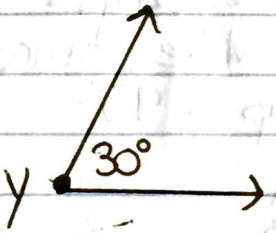


Naming Angles - use points
$\angle ABD$ or $\angle DBA$
$\angle CBD$ or $\angle DBC$
↖ vertex ↗

= equal
≈ approximately
≅ congruent
≠ not equal
~ similar

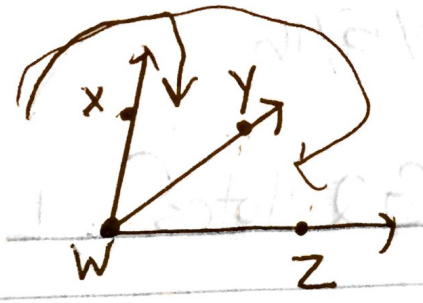


$\angle X \cong \angle Y$
↖ congruent
exactly same size and shape



$m\angle X = 30°$
↖ measure → number of degrees

$m\angle X = m\angle Y$



Adjacent Angles

① common vertex

② share a common ray

∠XWY and ∠YWZ are adjacent pairs and must touch

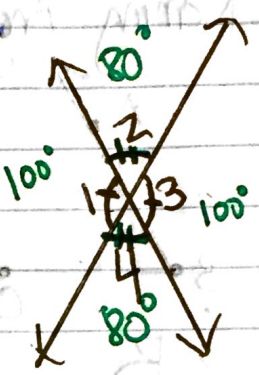
Vertical Angles

angles formed by 2 intersecting lines

∠1 and ∠3 are vertical

∠2 and ∠4 are vertical

vertical ∠s are ≅



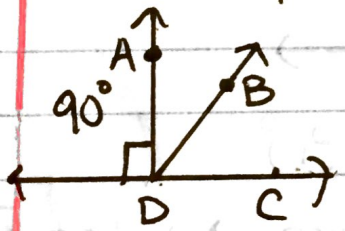
∠1 ≅ ∠3

∠2 ≅ ∠4

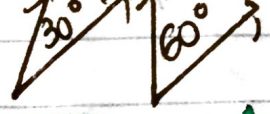
Angle Pairs

Complementary Angles

2 angles whose measures add up to 90°



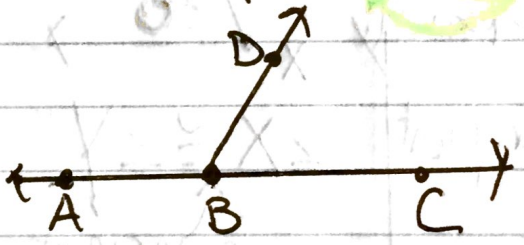
∠ADB + ∠BDC are complementary



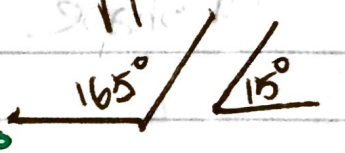
$m\angle ADB + m\angle BDC = 90°$

Supplementary

2 angles whose measure add up to 180°



∠ABD and ∠DBC are supplementary



$m\angle ABD + m\angle CBD = 180°$