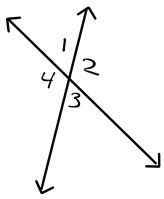
Lesson 7.1a Adjacent and Vertical Angle

7.1a Adjacent & Vertical Angles

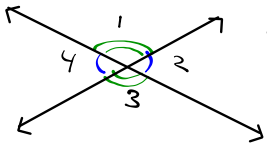
Adjacent angle - share a common side and have the same vertex



∠1 and ∠2 are adjacent
∠2 and ∠4 are not adjacent

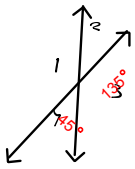
Vertical angles - two angles that are opposite of each other formed by the intersection of two lines. Vertical angles are congruent.

* Congruent means equal or same measure



∠1 & ∠3 are vertical angles
∠2 & ∠4 are vertical angles

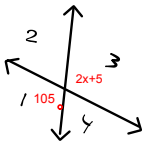
Ex. 1



What is measure of ∠2 & ∠1?

∠2 = 45°
∠1 = 135°

Ex. 2

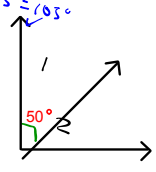


Find x.

∠1 = ∠3
105° = 2x + 5
−5° −5°
100° = 2x
50 = x

Check:
∠1 = ∠3
105° = 2x + 5°
105° = 2(50°) + 5°
105° = 100° + 5°
105° = 105° ✓

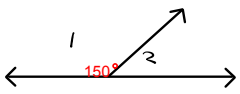
Ex. 3



∠1 + ∠2 = 90°
50° + ∠2 = 90°
−50° −50°
∠2 = 40°

Check: ∠1 + ∠2 = 90°
50° + 40° = 90°
90° = 90° ✓

Ex. 4



∠1 + ∠2 = 180°
150° + ∠2 = 180°
−150° −150°
∠2 = 30°

Check: ∠1 + ∠2 = 180°
150° + 30° = 180°
180° = 180° ✓

HW: p. 274 #1-6 omit 3, 8-13, 19-25 odd