3.3b - Proofs of Lines Parallel

1) Chapter Test - Wednesday, November 12

2) Warm Up Questions

3) Assignment Correction and Questions

4) Reminder of Proofs (in general)

5) Practice A - In Groups

6) Group Assignment Time
(work on your own, but in groups)

Use the figure for Exercises 1–8. Tell whether lines \( m \) and \( n \) must be parallel from the given information. If they are, state your reasoning. (Hint: The angle measures may change for each exercise, and the figure is for reference only.)

1. \( \angle 7 \equiv \angle 3 \)

2. \( m\angle 3 = (15x + 22)^\circ, \ m\angle 1 = (19x - 10)^\circ, \ x = 8 \)

3. \( \angle 7 \equiv \angle 6 \)

4. \( m\angle 2 = (5x + 3)^\circ, \ m\angle 3 = (8x - 5)^\circ, \ x = 14 \)

5. \( m\angle 8 = (6x - 1)^\circ, \ m\angle 4 = (5x + 3)^\circ, \ x = 9 \)

6. \( \angle 5 \equiv \angle 7 \)

7. \( \angle 1 \equiv \angle 5 \)

8. \( m\angle 6 = (x + 10)^\circ, \ m\angle 2 = (x + 15)^\circ \)
Proofs in General...

Given:

Prove:

\[ \triangle ABC \]

Statements

1. \( \angle 1 \cong \angle 2 \)
2. \( \overline{AB} \parallel \overline{CD} \)

Reasons

1. Given
2. If a pair of alternate interior angles are congruent, then the lines are parallel.
Assignment (Due Thursday 10/30)

1) Pg. 166 #10, 22, 30-36, 38, 40, 55, 56

2) Progress Report

3) Test Retake by Wednesday, November 5