Name _____ Date _____

LESSON 3.3

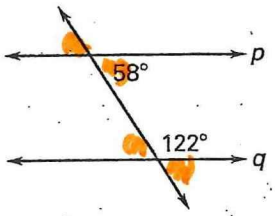
Practice

For use with pages 161–169

if CA ≅ AI ≅ AE ≅ CI ≅ supplementary, then p ∥ q. by CCA
CAI
CAE
CCI or CSSI

Is there enough information to prove that lines *p* and *q* are parallel? If so, state the postulate or theorem you would use.

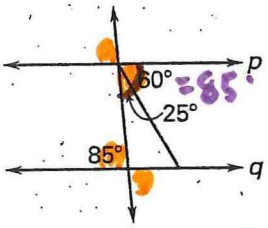
1.



58 + 122 = 180 ✓

p ∥ q by CCI

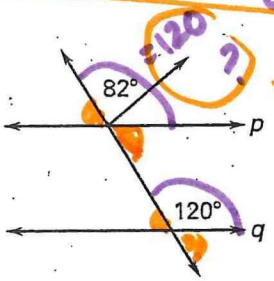
2.



85 = 85 ✓

p ∥ q by CAI

3.



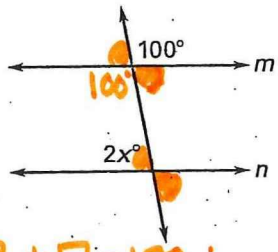
→ can not assume that it is 120 ° CA

Not enough info.

120 = 82 + ?

Find the value of *x* that makes *m* ∥ *n*.

4.



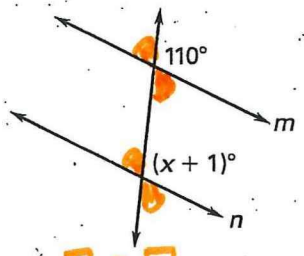
∠ + ∠ = 180°

2x + 100 = 180

2x = 80

If x = 40, then m ∥ n. CCI

5.



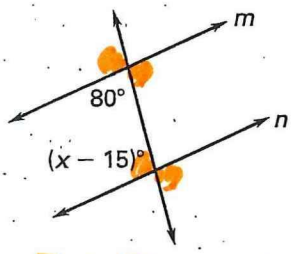
∠ = ∠

x + 1 = 110°

x = 109°

m ∥ n CCA

6.



∠ + ∠ = 180°

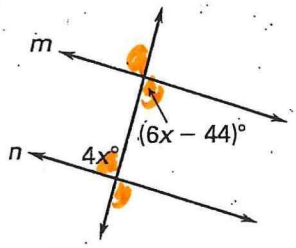
x − 15 + 80 = 180

x + 65 = 180

x = 115

m ∥ n by CCI

7.



∠ = ∠

6x − 4 = 4x

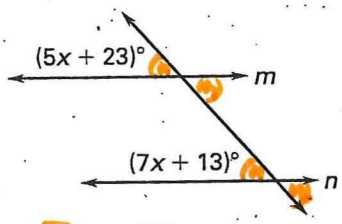
2x − 4 = 0

2x = 4

x = 2

m ∥ n by CAI

8.



∠ = ∠

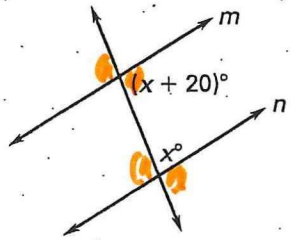
7x + 13 = 5x + 23

2x = 10

x = 5

m ∥ n CCA

9.



∠ + ∠ = 180°

x + 20 + x = 180

2x + 20 = 180

2x = 160

x = 80

m ∥ n by CCI

Copyright © by McDougal Littell, a division of Houghton Mifflin Company.

Name _____ Date _____

LESSON 3.3 **Practice** *continued*
For use with pages 161–169

In Exercises 10–12, choose the word that best completes the statement.

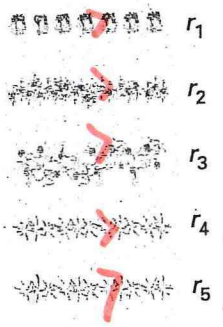
10. If two lines are cut by a transversal so the alternate interior angles are (*congruent*, *supplementary*, *complementary*), then the lines are parallel.

11. If two lines are cut by a transversal so the consecutive interior angles are (*congruent*, *supplementary*, *complementary*), then the lines are parallel.

12. If two lines are cut by a transversal so the corresponding angles are (*congruent*, *supplementary*, *complementary*), then the lines are parallel.

13. **Gardens** A garden has five rows of vegetables. Each row is parallel to the row immediately next to it. *Explain* why the first row is parallel to the last row.

Transitive of ∥

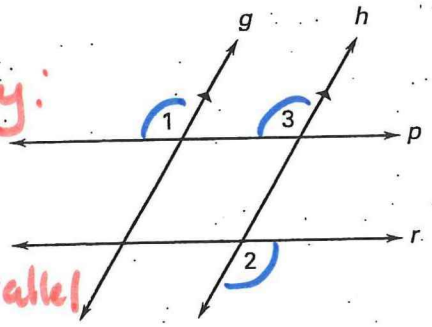


In Exercises 14–18, complete the two-column proof.

GIVEN: $g \parallel h$, $\angle 1 \cong \angle 2$

PROVE: $p \parallel r$

, Reasons can only be by:
CCA
CAI
CAE
CCI
to prove lines are parallel



Statements	Reasons
$g \parallel h$	14. Given
$\angle 1 \cong \angle 3$	15. CA
$\angle 1 \cong \angle 2$	16. Given
$\angle 2 \cong \angle 3$	17. Transitive
$p \parallel r$	18. CAE

© Houghton Mifflin Company

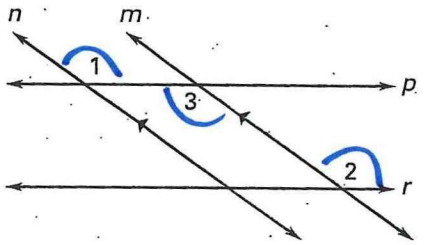
Name _____ Date _____

LESSON 3.3 **Practice** *continued*
For use with pages 161–169

In Exercises 19–23, complete the two-column proof.

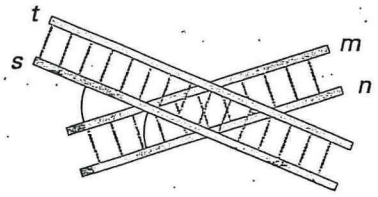
GIVEN: $n \parallel m$, $\angle 1 \cong \angle 2$

PROVE: $p \parallel r$ only be by CCA, CAI, CAE, CCI



Statements	Reasons
$n \parallel m$	19. Given
$\angle 1 \cong \angle 3$	20. AI?
$\angle 1 \cong \angle 2$	21. Given
$\angle 2 \cong \angle 3$	22. Transitive
$p \parallel r$	23. CAI?

24. Railroad Tracks Two sets of railroad tracks intersect as shown. How do you know that line n is parallel to line m?



Copyright © by McDougal Littell, a division of Houghton Mifflin Company.