Name _____ Date _____

CA, AI, AE, VA CI, LP

□ = □ □ + ■ = 180°

■ = ■

LESSON 3.2

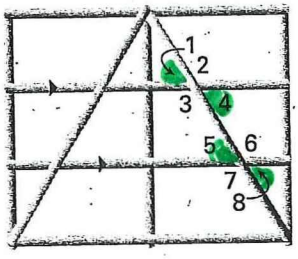
Practice

For use with pages 153–160

Find the angle measure. Tell which postulate or theorem you use.

1. If $m\angle 1 = 50°$, then $m\angle 5 =$ ___?___. 50°
CA ≅

2. If $m\angle 4 = 45°$, then $m\angle 6 =$ ___?___. 135°
180 − 45 CI supp.



3. If $m\angle 2 = 130°$, then $m\angle 7 =$ ___?___. 130°
AE ≅

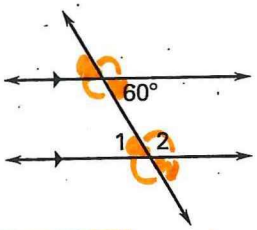
4. If $m\angle 6 = 123°$, then $m\angle 3 =$ ___?___. 123°
AI ≅

■ = ■

□ = □ ■ + □ = 180°

Find $m\angle 1$ and $m\angle 2$. Reasons are underlined in green.

5.



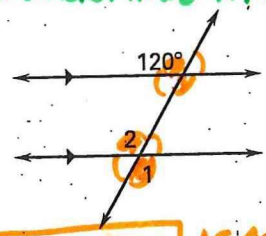
m∠1 = 60° AI ≅

m∠2 = 180 − 60

m∠2 = 120° SSI w/ 60

LP w/ ∠1

6.

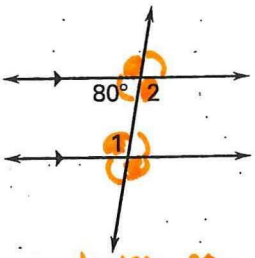


m∠1 = 120° AE ≅

m∠2 = 120° CA w/ 120°

VA w/ ∠1

7.



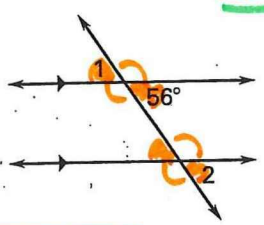
m∠1 = 180 − 80

m∠1 = 100° CI supp.

m∠2 = 100° LP w/ 80°

AI w/ ∠1

8.

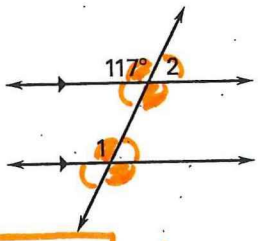


m∠1 = 56° VA

m∠2 = 56° CA w/ 56°

AE w/ ∠1

9.



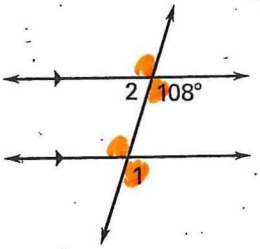
m∠1 = 117° CA

m∠2 = 180 − 117

m∠2 = 63°

LP w/ ∠2

10.



m∠1 = 108° CA ≅

m∠2 = 180 − 108

m∠2 = 72° LP w/ 108°

Name _____ Date _____

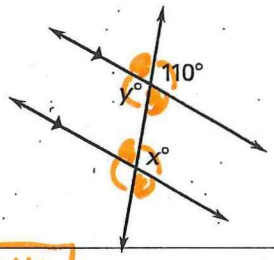
LESSON 3.2

Practice *continued*

For use with pages 153–160

Find the values of x and y.

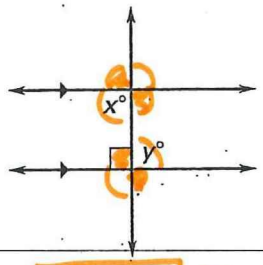
11.



$x = 110$ CA

$y = 110$ AI or VA

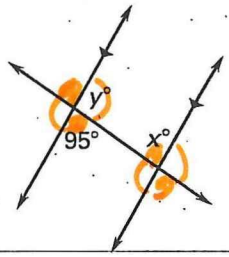
12.



$x = 90$ CI

$y = 90$ AI or LP

13.

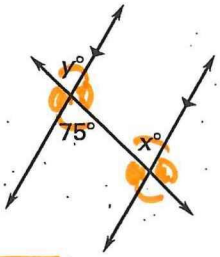


$x = 95$ AI

$y = 180 - 95$

$y = 85$ CI or LP

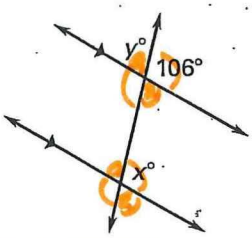
14.



$x = 75$ AI

$y = 75$ CA or VA

15.

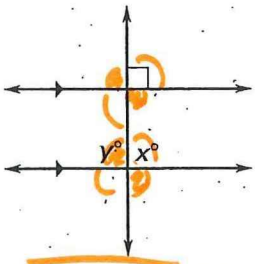


$x = 106$ CA

$y = 180 - 106$

$y = 74$ LP

16.

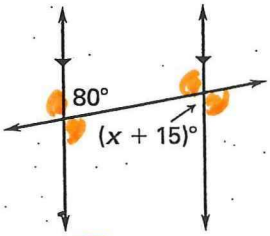


$x = 90$ CA

$y = 90$ LP

Find the value of x.

17.

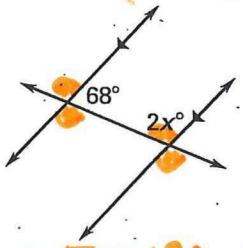


$\square = \square$

$x + 15 = 80$

$x = 65$ AI

18.



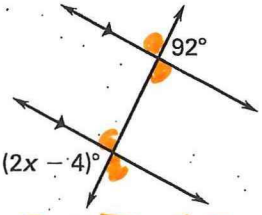
$\square + \square = 180$ CI

$2x + 68 = 180$

$2x = 112$

$x = 56$

19.



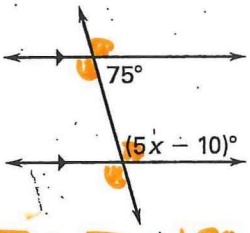
$\square = \square$ AE

$2x - 4 = 92$

$2x = 96$

$x = 48$

20.



$\square + \square = 180$ CI

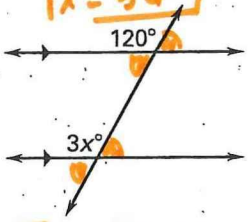
$5x - 10 + 75 = 180$

$5x + 65 = 180$

$5x = 115$

$x = 23$

21.

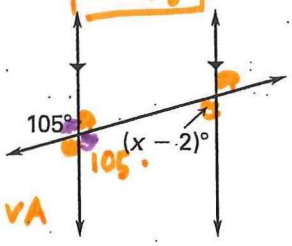


$\square = \square$ CA

$3x = 120$

$x = 40$

22.



105° VA

$\square + \square = 180$ CI

$x - 2 + 105 = 180$

$x + 103 = 180$

$x = 77$

↳ because of VA

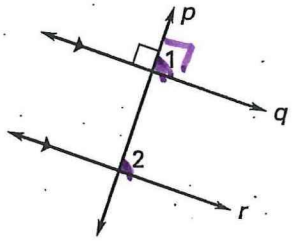
Name _____ Date _____

LESSON 3.2 **Practice** *continued*
For use with pages 153–160

In Exercises 23–31, complete the two-column proof.

GIVEN: $p \perp q, q \parallel r$

PROVE: $p \perp r$



Statements	Reasons
$p \perp q$	23. Given
$\angle 1$ is a right angle.	24. Def of $\perp$
$m\angle 1 = 90°$	25. Def of $\angle$
$q \parallel r$	26. Given
$\angle 1 \cong \angle 2$	27. CA? $\cong$
$m\angle 1 = m\angle 2$	28. Def of $\cong$
$m\angle 2 = 90°$	29. Substitution
$\angle 2$ is a right angle.	30. Def. of $\angle$
$p \perp r$	31. Def? of $\perp$