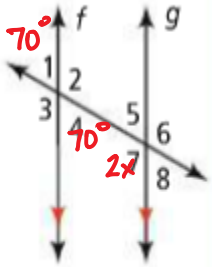
DAY 7 – 3.2 HOMEWORK

Page 152 #1-4, 7, 13, 16-18, 22

Use the diagram for Exercises 1–4.



1. Identify four pairs of congruent angles. (Exclude vertical angle pairs.) Answers vary
2. Identify two pairs of supplementary angles. (Exclude linear pairs.) ∠1, ∠6 ∠2, ∠5 ∠4, ∠7 ∠3, ∠8
3. If $m\angle 1 = 70$, what is $m\angle 8$? 70°
4. If $m\angle 4 = 70$ and $m\angle 7 = 2x$, ← supp. ∠s what is the value of x?

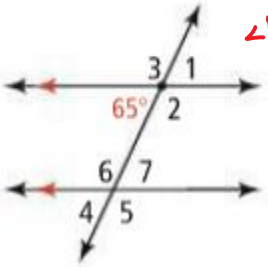
$70 + 2x = 180$

$2x = 110$

$\boxed{x = 55°}$

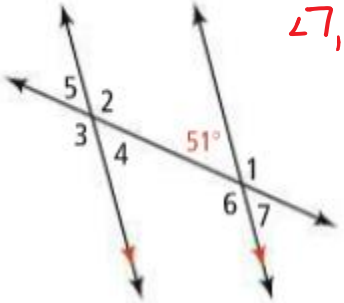
Identify all the numbered angles that are congruent to the given angle. Justify your answers.

7.



∠1, ∠7, ∠4

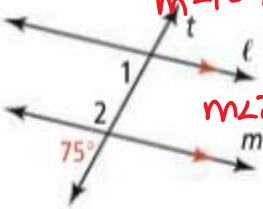
8.



∠7, ∠4, ∠5

Find $m\angle 1$ and $m\angle 2$. Justify each answer. See Proble

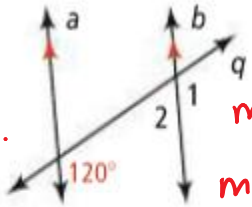
12.



$m\angle 1 = 75°$ corr. ∠s ≅

$m\angle 2 = 105°$ LP∠s supp.

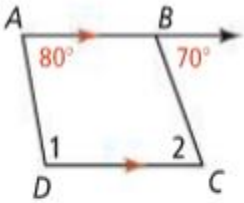
13.



$m\angle 1 = 120°$ corr ∠s

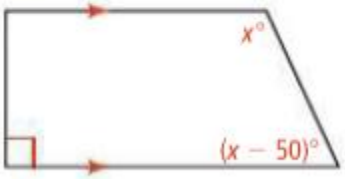
$m\angle 2 = 60°$ s.s. int ∠s supp

14.

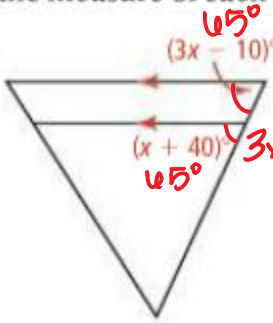


Algebra **Find the value of x. Then find the measure of each labeled angle.** See Proble

15.



16.



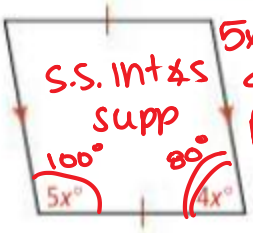
corr ∠s ≅

$3x - 10 = x + 40$

$2x = 50$

$\boxed{x = 25}$

17.



s.s. int ∠s supp

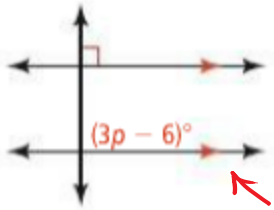
$5x + 4x = 180$

$9x = 180$

$\boxed{x = 20}$

Algebra Find the values of the variables.

18.



corr ∠s ≅

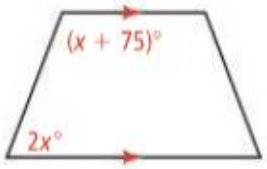
$3p - 6 = 90$

$3p = 96$

$\boxed{p = 32}$

19.

22. Error Analysis Which solution for the value of x in the figure at the right is incorrect? Explain.



A.

$$2x = x + 75$$
$$x = 75$$

incorrect!
same side int ∠s are supp... NOT ≅

B.

$$2x + (x + 75) = 180$$
$$3x + 75 = 180$$
$$3x = 105$$
$$x = 35$$

← CORRECT!!