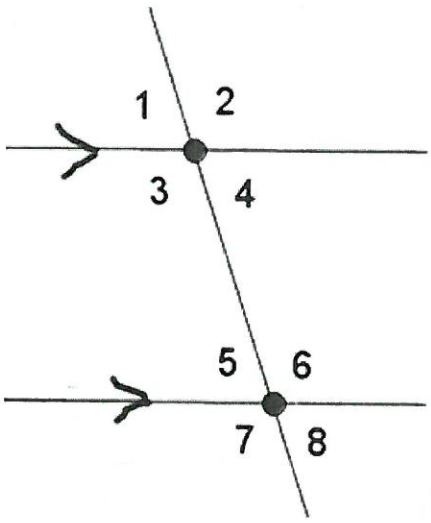
Name: AK Period: Date:

Unit 3 Practice Test

1. Using the figure to the right, identify each pair of:



Corresponding Angles

1,5 2,6 3,7 4,8

Alternate Interior Angles

3,6 4,5

Consecutive Interior Angles

3,5 4,6

Vertical Angles

1,4 2,3 5,8 6,7

2. Which of the following pairs of angles are always congruent if they are formed by parallel lines and a transversal? Circle all that apply.

A. a linear pair of angles B. vertical angles C. corresponding angles

D. alternate interior angles E. alternate exterior angles F. consecutive interior angles

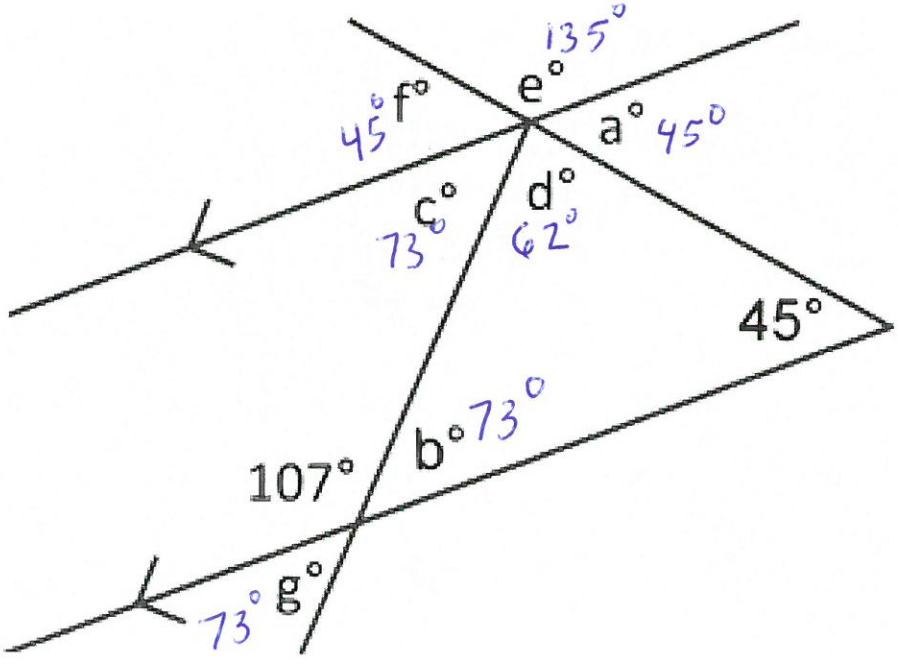
3. Which of the following pairs of angles are always supplementary if they are formed by parallel lines and a transversal? Circle all that apply.

A. a linear pair of angles B. vertical angles C. corresponding angles

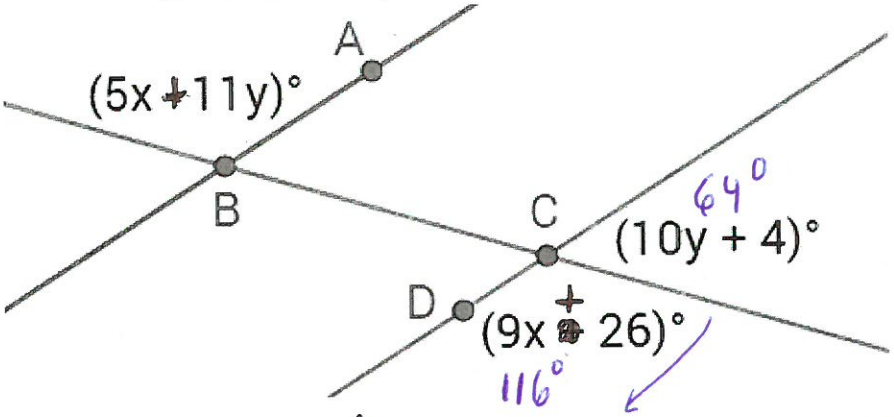
D. alternate interior angles E. alternate exterior angles F. consecutive interior angles

G. vertical angles formed by perpendicular lines

4. Find the measure of each missing angle in the picture on the right.



5. Given AB || CD, find x and y.



$5x+11y = 9x+26$

$-4x+11y = 26$

$9x+10y = 150$

$10y+4+9x+26 = 180$

$-36x+99y = 234$

$36x+40y = 600$

$139y = 834$

$y = 6$

$X = 10$

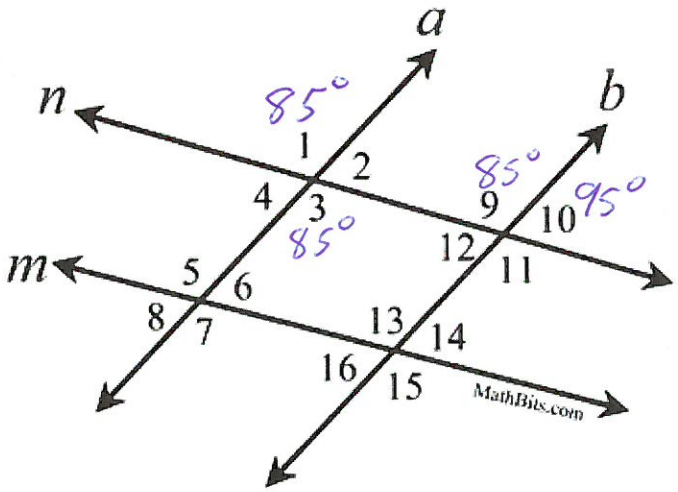
6. Are lines a and b parallel given the information below? Also, find x and y.

Angle 1 = 10x + 5 $85°$

Angle 3 = 53 + 4x $85°$

Angle 9 = 3y +100 $85°$

Angle 10 = 100 + y $95°$



$10x+5 = 53+4x$

$6x = 48$

$X = 8$

$3y+100+100+y = 180$

$4y+200 = 180$

$4y = -20$

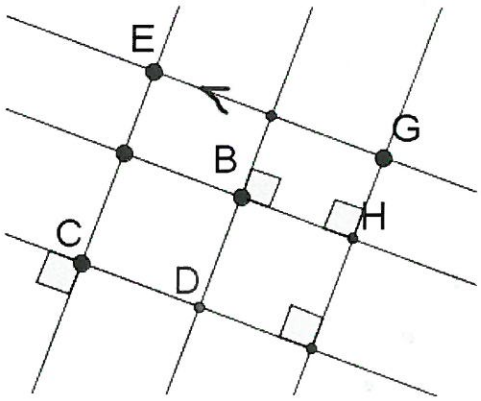
$y = -5$

x = 8 y = -5

Is line a parallel to line b? Circle: Yes No

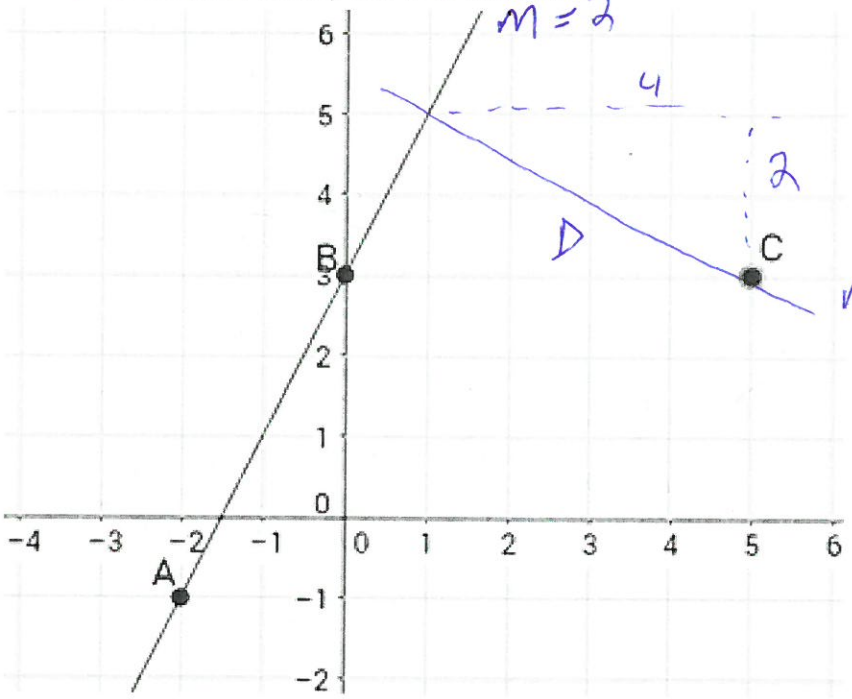
Alt. Int angles are equal.

7. True or False. (6pts)
You can assume:



line CD || line BH	T	F
line EG || line BH	T	F
line BD || line GH	T	F

8. Find the distance from point C to line AB.



$D^2 = 2^2 + 4^2$

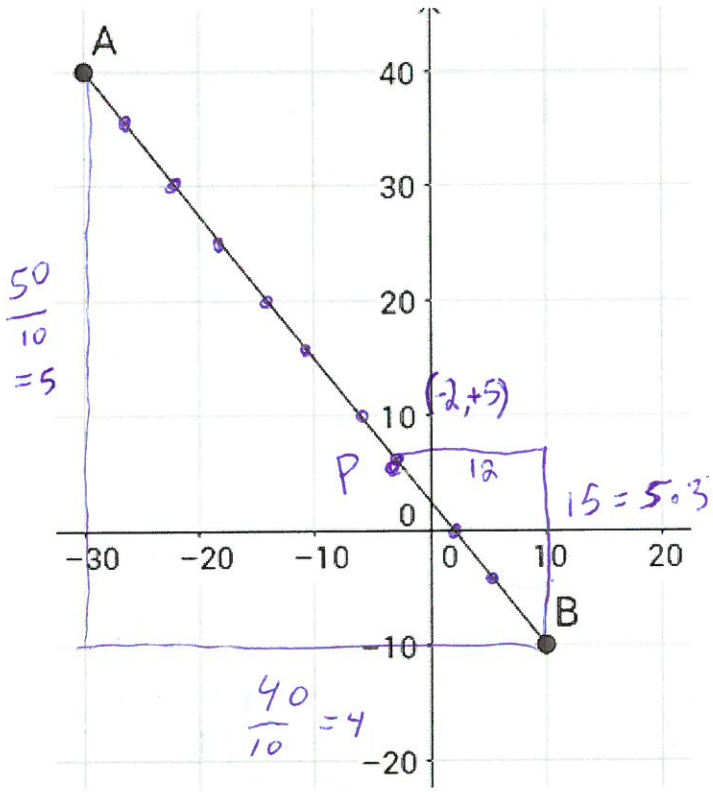
$\sqrt{D^2} = \sqrt{20}$

$2\sqrt{5}$

9. Find the equation of a line perpendicular to $y = (-\frac{2}{3})x + 6$ through the point (-3, 5) in point slope form.

$y - 5 = \frac{3}{2}(x + 3)$

10. Partition line segment AB by giving the coordinates of point P that would make the ratio of AP to PB 7:3.



$(-2, 5)$

11. Write the equation of the perpendicular bisector of segment AB given A (3, 6) and B(-5, 10) in slope intercept form.

$m = \frac{10-6}{-5-3} = \frac{4}{-8} = -\frac{1}{2}$

$\frac{1}{m} = 2$

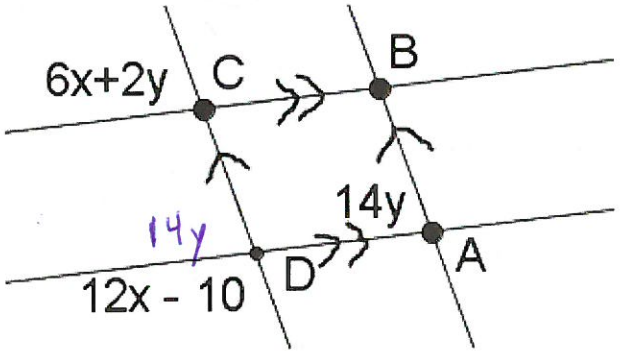
midpoint $(-1, 8)$

$y - 8 = 2(x+1)$

$y - 8 = 2x + 2$

$y = 2x + 10$

12. Given AB || CD and AD || BC, find x and y.



$6x + 2y = 14y$

$6x - 12y = 0$

$x - 2y = 0$

$\times(-6)$

$-6x + 12y = 0$

$14y + 12x - 10 = 180$

$12x + 14y = 190$

$6x + 7y = 95$

$6x + 7y = 95$

$19y = 95$

$y = 5$ $\quad x = 10$