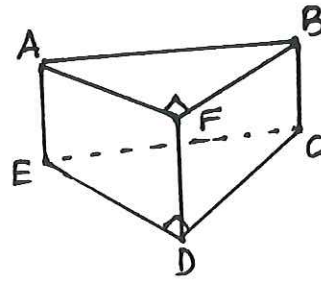


# Brown's Chapter 3 Practice Test

Be sure to check your solutions with answer key on Moodle

KEY

#1-3, Use the diagram at right.



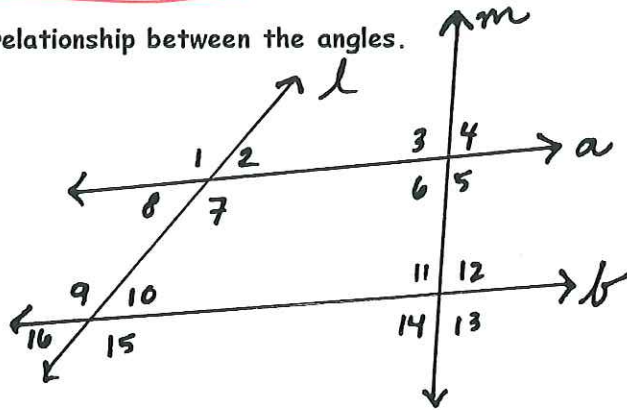
- Name a segment perpendicular to  $\overline{FB}$   
Examples!  $\overline{AB}$ ,  $\overline{FD}$ ,  $\overline{BC}$
- Name a segment skew to  $\overline{EC}$ .  
Examples!  $\overline{FD}$ ,  $\overline{AF}$ ,  $\overline{FB}$
- Name a segment parallel to  $\overline{FD}$ .  
 $\overline{BC}$  or  $\overline{AE}$

#4-6, Use the points A(3, -2), B(0,5) and C(7,5)

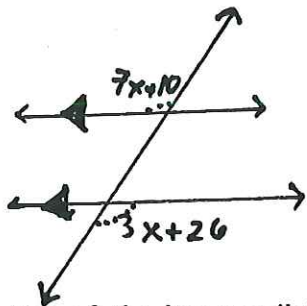
- Slope of  $\overline{AB}$ .  $\frac{5+2}{0-3} = \left(-\frac{7}{3}\right)$
- Slope of line  $\perp$  to  $\overline{AB}$ .  $\left(\frac{3}{7}\right)$
- Slope of line  $\perp$  to  $\overline{CB}$ .  
 $\frac{5-5}{7-0} = \frac{0}{7} = 0$  undefined slope is  $\perp$

#7-11, Use the diagram at right to name the relationship between the angles.

- $\angle 2$  &  $\angle 6$  alternate interior
- $\angle 12$  &  $\angle 4$  corresponding
- $\angle 7$  &  $\angle 8$  linear pair
- $\angle 10$  &  $\angle 6$  none
- $\angle 15$  &  $\angle 14$  Same Side Interior



12. Solve for x.



Alt. Ext. angles =  
 $7x+10 = 3x+26$   
 $4x = 16$   
 $x = 4$

13. Write the equation of the line parallel to  $y = \frac{1}{2}x - 3$  and through (6, 10)

$y = \frac{1}{2}x + b$   
 $10 = \frac{1}{2}(6) + b$   
 $10 = 3 + b$   
 $7 = b$

plug in point

$y = \frac{1}{2}x + 7$

OR  
 $y - 10 = \frac{1}{2}(x - 6)$

14. Write the equation - in point-slope form - of the line perpendicular to  $y = \frac{1}{3}x + 5$  and through  $(-4, 2)$

$\perp$  slope =  $-3$

point =  $-4, 2$

$y - 2 = -3(x + 4)$

15. Write a proof (2-column?)

Given:

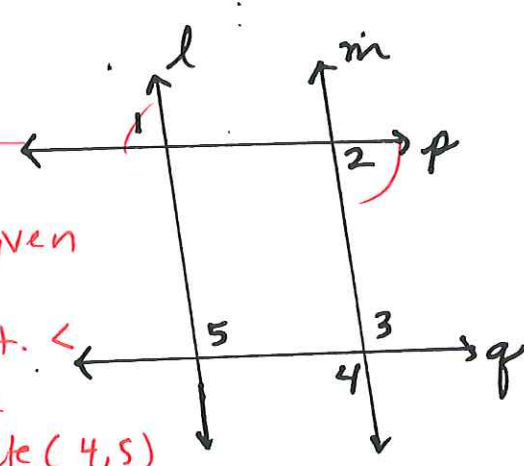
$l \parallel m$

$p \parallel q$

$m\angle 1 = 30^\circ$

Prove:  $m\angle 4 = 150^\circ$

State	Reas
1. $l \parallel m$	1. } given
2. $p \parallel q$	2. }
3. $\angle 1 = 30$	3. }
4. $\angle 2 = 30$	4. Alt. Ext. $\angle$
5. $\angle 2 + \angle 3 = 180$	5. SS I
6. $30 + \angle 3 = 180$	6. substitute (4, 5)
7. $\angle 3 = 150$	7. subtract
8. $\angle 4 = 150$	8. Vertical $\angle$ s



16. In the diagram for #15 above, if  $\angle 3 \cong \angle 5$ , which lines would be parallel and why?

$l \parallel m$ , corresponding converse.