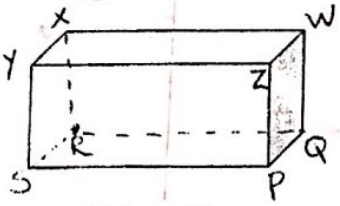
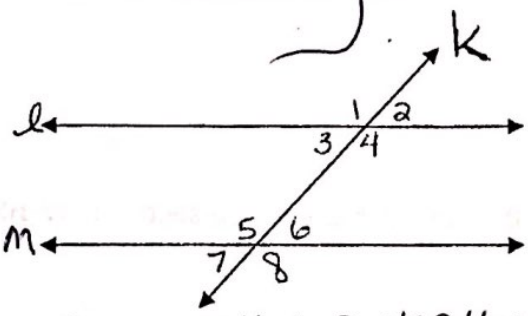
Chapter 3 Review....

Name Key

Given these figures:





1. Define and identify:

- Parallel Planes - Plane WXY // Plane SRQ, XYS//WZP, YSP//XRQ
- Parallel Lines - l//m, SP//RQ//XW//YZ, YS//XR//WQ//ZP
- Skew Lines - SR skew to ZP & WQ, YZ skew to XR & WQ, many more...
- The intersection of planes - is always a line
- The intersection of lines - is always a point
- Alternate Interior Angles - 3 & 6, 5 & 4
- Alternate Exterior Angles - 7 & 2, 1 & 8
- Consecutive Interior Angles - 3 & 5, 4 & 6
- Corresponding Angles - 1 & 5, 3 & 7, 2 & 6, 4 & 8
- Distance Formula - $d=\sqrt{(x_2-x_1)^2+(y_2-y_1)^2}$

Given A(3,1) B(-2,5) C(3,-5) D(-1,6)

3. Find the slope of AB.

$\frac{5-1}{-2-3}=\frac{4}{-5}=\boxed{-\frac{4}{5}}$

4. Find the slope of CD.

$\frac{6--5}{-1-3}=\frac{11}{-4}=\boxed{-\frac{11}{4}}$

5. Write an equation in ~~point-slope form~~ Slope Intercept Form for AB.

$y=-\frac{4}{5}x+b$, plug in (3,1), $1=-\frac{4}{5}(3)+b$

$1=-\frac{12}{5}+b$

$+\frac{12}{5}$ $+\frac{12}{5}$

$b=3.4$

$\boxed{y=-\frac{4}{5}x+3.4}$

6. Write an equation in slope-intercept form for CD.

$y=-\frac{11}{4}x+b$

plug in (-1,6)

$6=-\frac{11}{4}(-1)+b$

$6=\frac{11}{4}+b$

$-11/4$ $-11/4$

$b=3.25$

$\boxed{y=-\frac{11}{4}x+3.25}$

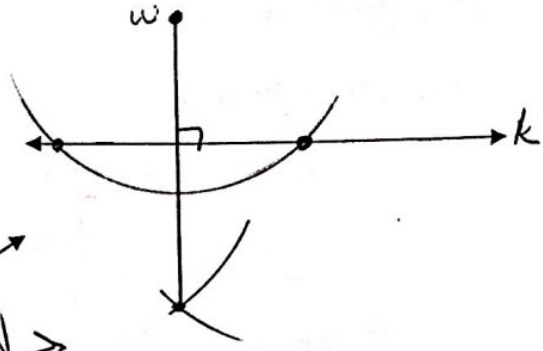
7. What is the slope of a line parallel to AB? What is the slope of a line perpendicular to AB? parallel $=-\frac{4}{5}$ Perpendicular $=\frac{5}{4}$

8. What is the slope of a line parallel to CD? What is the slope of a line perpendicular to CD?

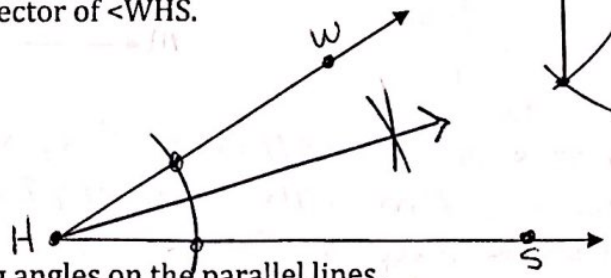
parallel $=-\frac{11}{4}$ Perpendicular $=\frac{4}{11}$

Watch the videos online!

9. Construct a line perpendicular to *k* through point w.

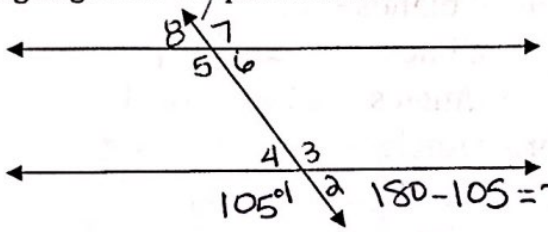


10. Construct an angle bisector of <WHS.



11. Fill in all of the missing angles on the parallel lines.

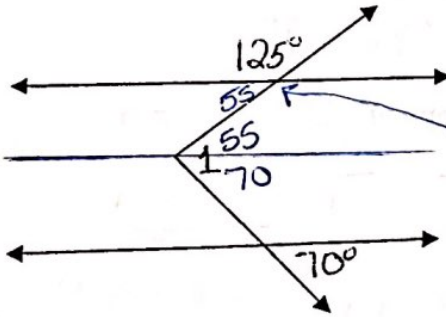
m<1 = 105°
m<2 = 75°
m<3 = 105°
m<4 = 75°



180 − 105 = 75°

m<5 = 105°
m<6 = 75°
m<7 = 105°
m<8 = 75°

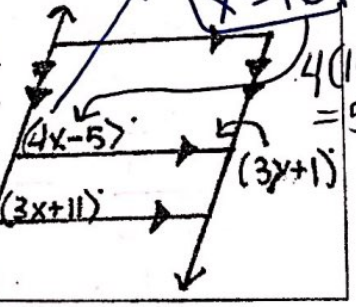
12. Find the measure of <1 in the crook transversal.



180
−125
55

m<1 =
55 + 70 =
125°

14. x = 16
15. y = _____

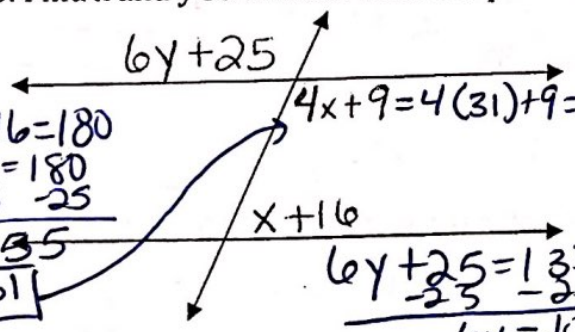


4x − 5 = 3x + 11
−3x +5 −3x +5
x = 16

4(16) − 5
= 59

3y + 1 + 59 = 180
−60 −60
3y = 120
y = 40

13. Find x and y so that the lines are parallel.



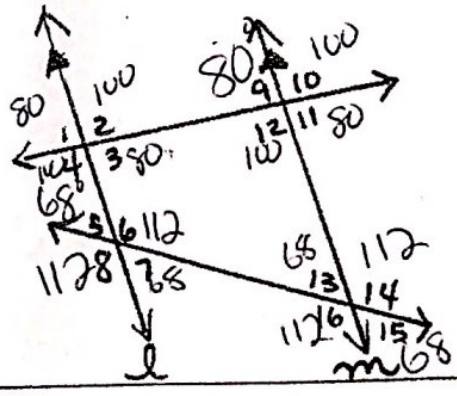
4x + 9 = 4(31) + 9 = 133

−9 + x + 16 = 180
5x + 25 = 180
−25 −25
5x = 155
x = 31

6y + 25 = 133
−25 −25
6y/6 = 108/6
y = 18

17. Given: m<9 = 80°, m<5 = 68°

a. m<12 = 100°
b. m<1 = 80°
c. m<7 = 68°
d. m<16 = 112°
e. m<15 = 68°
f. m<2 = 100°



≅ <5 because corresponding <s theorem.
≅ <3 because vertical angles
≅ <8 because alternate exterior
+ <5 = 180° because consecutive interior
≅ <3 because alternate interior <s theorem.
≅ <2 because alternate exterior