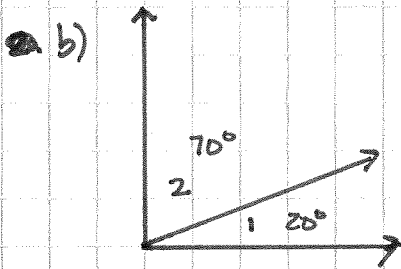
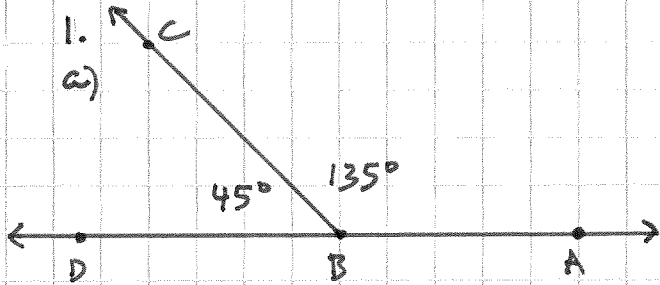
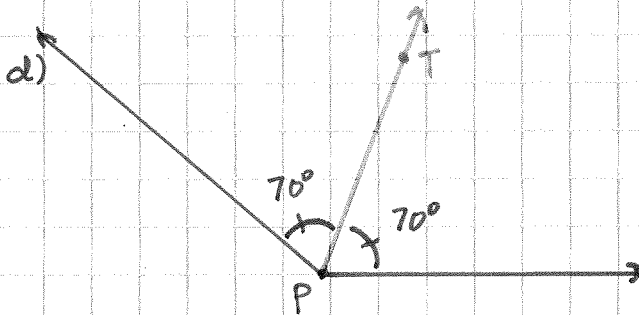
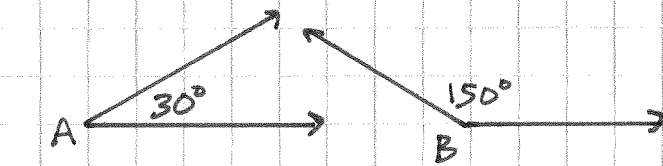


# #8 Ch 1 Review



c)

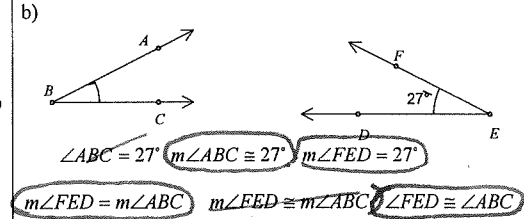
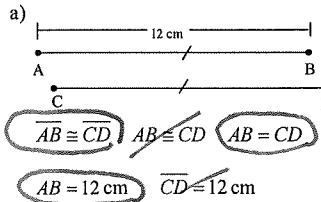


2) continued...

- supplementary - two angles that sum to  $180^\circ$
- distance formula:  $\sqrt{(x_2 - x_1)^2 + (y_2 - y_1)^2}$
- midpoint formula:  $\left(\frac{x_1 + x_2}{2}, \frac{y_1 + y_2}{2}\right)$
- slope formula:  $m = \frac{y_2 - y_1}{x_2 - x_1}$

3)

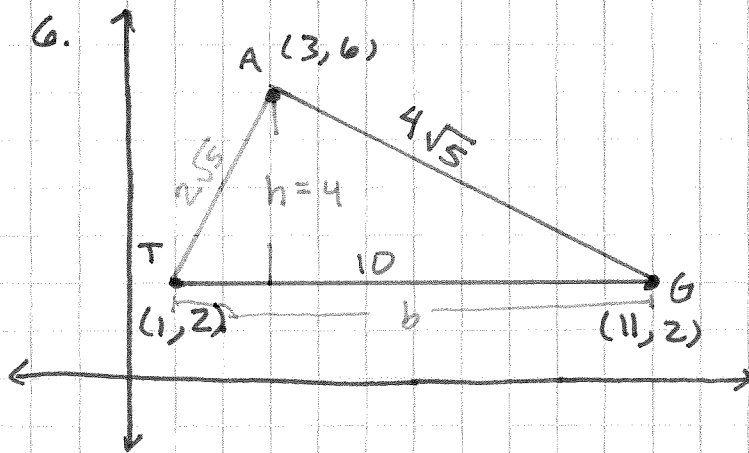
3. Circle the statements that are true and use correct notation. Cross out the incorrect statements. Make sure you understand the difference between  $=$  &  $\cong$ ,  $AB$  &  $\overline{AB}$ , and  $m\angle ABC$  &  $\angle ABC$



- 4 a) plane  $\overline{SVU}$ , plane  $\overline{TUV}$  ...  
 b)  $\overline{SW}$   
 c) T  
 d) U  
 e) plane  $\overline{ZYU}$  and plane  $\overline{ZYX}$

5. a)  $\angle AOB$   
 b)  $\angle BOC$   
 c)  $\angle AOC$   
 d)  $\angle AOD$   
 e)  $\angle BOC$  and  $\angle COD$   
 f)  $\angle COD$  and  $\angle AOE$   
 g)  $\angle BOE$
- } answers could vary

- 2) - acute - an angle less than  $90^\circ$   
 - bisector - splits a figure into two congruent figures  
 - complementary angles - two angles that sum to  $90^\circ$   
 - linear pair - two angles that are adjacent and supplementary  
 - obtuse angle - an angle greater  $90^\circ$   
 - right angle - an angle measuring  $90^\circ$   
 - straight angle - an angle measuring  $180^\circ$



$$\text{Perim} = 10 + 2\sqrt{5} + 4\sqrt{5}$$

$$= \boxed{10 + 6\sqrt{5}}$$

$$\text{Area} = \frac{1}{2}(10)(4)$$

$$= \frac{1}{2}(40)$$

$$= \boxed{20}$$

$$\text{or Area} = \frac{1}{2}(2\sqrt{5})(4\sqrt{5})$$

$$= \frac{1}{2} \cdot 8\sqrt{25}$$

$$= \frac{1}{2} \cdot 8 \cdot 5$$

$$= \boxed{20}$$

$$TG = 10$$

$$TA = \sqrt{(6-2)^2 + (3-1)^2}$$

$$= \sqrt{4^2 + 2^2}$$

$$= \sqrt{16+4}$$

$$= \sqrt{20}$$

$$= \sqrt{4 \cdot 5}$$

$$= 2\sqrt{5}$$

$$AG = \sqrt{(11-3)^2 + (2-6)^2}$$

$$= \sqrt{8^2 + (-4)^2}$$

$$= \sqrt{64+16}$$

$$= \sqrt{80}$$

$$= \sqrt{16 \cdot 5}$$

$$= 4\sqrt{5}$$

7. C(-3, 7) G(5, 1)

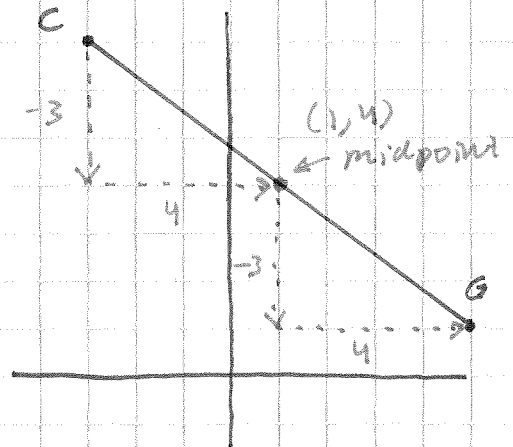
a) Midpoint:  $\left(\frac{-3+5}{2}, \frac{7+1}{2}\right)$

$$\left(\frac{2}{2}, \frac{8}{2}\right)$$

$$\boxed{(1, 4)}$$

b) Slope  $\overline{CG}$

$$m = \frac{1-7}{5-(-3)} = \frac{-6}{8} = \boxed{\frac{-3}{4}}$$



8)  $ST = 22 - 4$   
 $= 18$

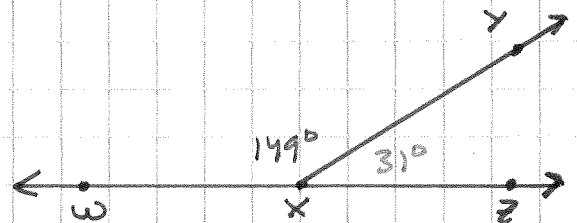
9)  $m\angle WXY + m\angle YXZ = 180^\circ$

$$6x + 59 + 3x - 14 = 180^\circ$$

$$9x + 45 = 180$$

$$9x = 135$$

$$x = 15$$

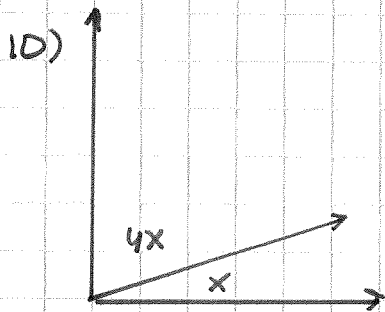


$$m\angle WXY = 6(15) + 59$$

$$= 90 + 59 = 149^\circ$$

$$m\angle YXZ = 3(15) - 14$$

$$= 45 - 14 = 31^\circ$$



$$\begin{aligned}x + 4x &= 90 \\5x &= 90 \\x &= 18\end{aligned}$$

angles:  $4(18) = 72^\circ$

$72^\circ, 18^\circ$

11)  $m\angle BAD = 31 + 24 = 55^\circ$

12)  $m\angle PRQ + m\angle QRS = m\angle PRS$   
 $3x - 8 + 2x + 6 = 98^\circ$   
 $5x - 2 = 98$   
 $5x = 100$   
 $x = 20$

$m\angle QRS = 2x + 6$   
 $= 2(20) + 6$   
 $= 40 + 6$   
 $= 46^\circ$

$m\angle PRQ = 3x - 8$   
 $= 3(20) - 8$   
 $= 60 - 8$   
 $= 52^\circ$

13) Bisector  $\rightarrow$  two congruent figures

$m\angle ABD = m\angle DBC$

$8x + 35 = 11x + 23$   
 $35 = 3x + 23$   
 $12 = 3x$   
 $4 = x$

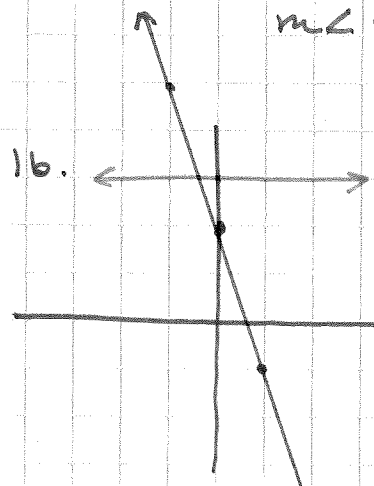
$m\angle ABD = 8(4) + 35$   
 $= 32 + 35$   
 $= 67^\circ$

$m\angle DBC = 11x + 23$   
 $= 11(4) + 23$   
 $= 44 + 23$   
 $= 67^\circ$

$m\angle ABC = 67^\circ + 67^\circ = 134^\circ$

14) a)  $\sqrt{32} = \sqrt{16 \cdot 2} = 4\sqrt{2}$   
 b)  $\sqrt{16} = 4$   
 c)  $\sqrt{3} + 5\sqrt{3} = 6\sqrt{3}$   
 d)  $\sqrt{6} \sqrt{2} = \sqrt{12} = \sqrt{4 \cdot 3} = 2\sqrt{3}$

15.  $\left(\frac{1}{3}\right)^2 + \left(\frac{1}{2}\right)\left(\frac{5}{3}\right)$   
 $\frac{2}{2} \cdot \frac{1}{9} + \frac{5}{6} \cdot \frac{2}{2}$   
 $\frac{2}{18} + \frac{15}{18} = \frac{17}{18}$



a)  $y = 3$   
 b)  $6x + 2y = 4$   
 $2y = -6x + 4$   
 $y = \frac{-6x + 4}{2}$   
 $y = -3x + 2$