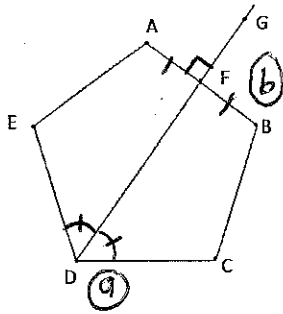
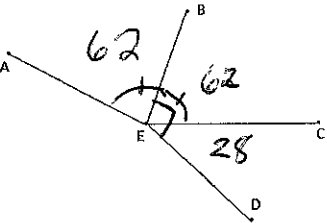


Geometry Unit 1 Review Guide



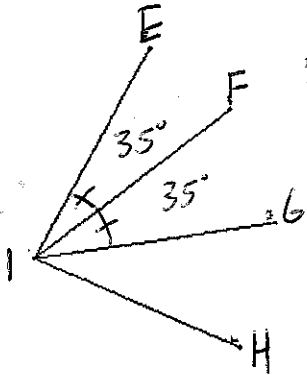
- Mark the figure on the left to show the following:
 - Ray DF is a bisector of angle EDC
 - F is the midpoint of segment AB
 - Angle AFG is a right angle
- Write the following in symbolic form:
 - Line AB \overleftrightarrow{AB}
 - Ray DF \overrightarrow{DF}
- What is another name for ray DF? \overrightarrow{DB} (Not \overrightarrow{FD} !)
- What are two more names for angle C? $\angle DCB, \angle BCD$

5. For the figure on the left, Ray BE bisects Angle AEC. Angles BEC and CED are complementary. If Angle DEC is 28 degrees, find the measure of the other two angles. Also, name a side of angle BEC.



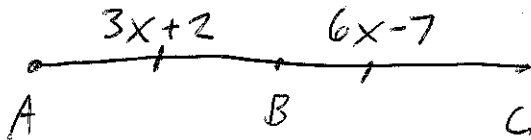
$62^\circ, 28^\circ$
 \downarrow
 BE or CE

6. For the figure on the left, if segment FI bisects angle EIG, and the measure of angle EIG is 70 degrees and the measure of angle EIF = $5y + 10$, find y.



$5y + 10 = 35$
 $5y = 25$
 $y = 5$

7. If B is the midpoint of segment AC and $AB = 3x + 2$ and $BC = 6x - 7$, then find x.



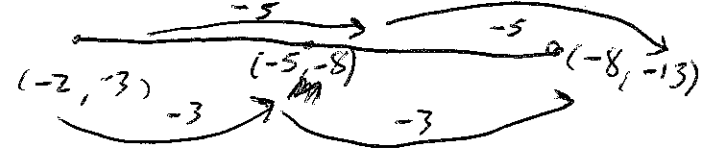
$3x + 2 = 6x - 7$
 $-3x + 7 \quad -3x + 7$

$9 = 3x$
 $\frac{9}{3} = \frac{3x}{3}$
 $3 = x$

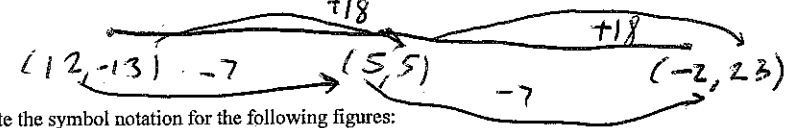
8. Find the midpoint of a line with endpoints (1, -3) and (12, 8)

$\left(\frac{1+12}{2}, \frac{-3+8}{2}\right) = \left(\frac{13}{2}, \frac{5}{2}\right)$

9. Find the endpoint of a line endpoint (-2, -3) and midpoint (-5, -8)



10. Find the other endpoint of a line segment with a midpoint of (5, 5) and endpoint (12, -13)



11. Write the symbol notation for the following figures:

- Line AB \overleftrightarrow{AB}
- Ray BC \overrightarrow{BC}
- Segment DF \overline{DF}
- Angle NAS $\angle NAS$

12. Know the 7 definitions from the "What is a Widget" Notes.

13. Write the converse of each statement. If the converse is true, write a biconditional statement. If false, give a counter example.

a) If a shape has exactly 3 sides, then that shape is a triangle.

Con: IF a shape is a Δ , then it has exactly 3 sides.

Bi: A shape is a Δ if and only if it has exactly 3 side

b) If it is Sunday, then we have no school.

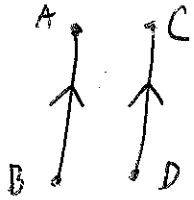
Con: IF we have no school, then it is Sunday

Counter EX: Sat, holidays, summer

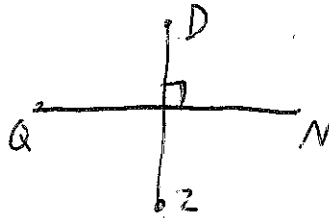
14. Write the inverse of the following statement. If you have no homework, then you will be happy.

IF you have homework, then you will be sad.

15. Sketch and label $\overline{AB} \parallel \overline{DC}$.



16. Sketch and label $\overline{QN} \perp \overline{DZ}$.



22. Mark each figure to indicate the given information.

Write the converse of each conditional. Is the converse true or false? If false provide a counterexample. If true, write a biconditional statement.

17. If today is Friday, then tomorrow is Saturday.

Con: If tomorrow is Saturday, then today is Friday

Bi: Today is Friday if and only if tomorrow is Saturday.

18. If a number is divisible by 6, then it is divisible by 3.

Con: If a number is divisible by 3, then it is divisible by 6.

Counter Ex: 9, 15

19. If $6x = 18$, then $x = 3$.

Con: If $x = 3$, then $6x = 18$.

Counter Ex: $5x = 15$

Decide whether each statement is true or false. Then write the inverse and tell whether it is true or false.

20. If I am in math class, then I am in school. (True)

If I am not in math class, I am not in school (False)

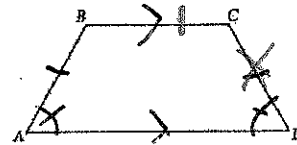
21. If the measure of angle T is 40, then T is not obtuse. (True)

~~INVERSE~~

If the measure of angle T does not equal 40, then it is obtuse.

(False)

a) $\overline{AB} \cong \overline{BC}$, $\overline{BC} \parallel \overline{AD}$, $\angle A \cong \angle D$



b) Point E is the midpoint of \overline{CB} , $\angle CDB$ is a right angle, and \overline{BF} is an angle bisector.

