Name: _____

Bench Mark- Unit 3 Review Geometry

Date ____/____/____/ Period 1 2 3 4 5 6

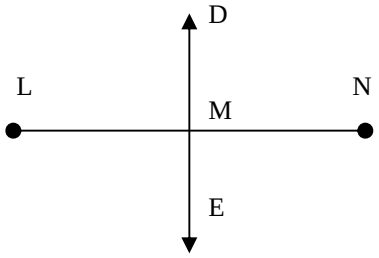
1 **G 17.0** Using a, b, c define the **reflexive property**, **symmetric property, and transitive property,**

Reflexive:_____

Symmetric:_____

Transitive:_____

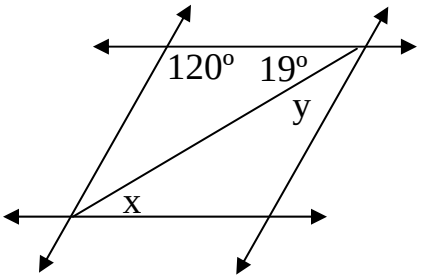
2 **G 17.0** Given: line DE is the perpendicular bisector of LN. Write 2 things that logically follow.



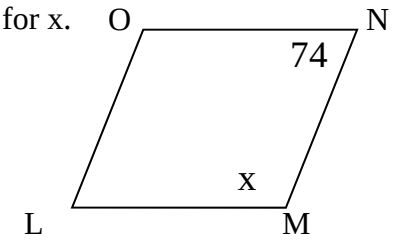
1._____

2._____

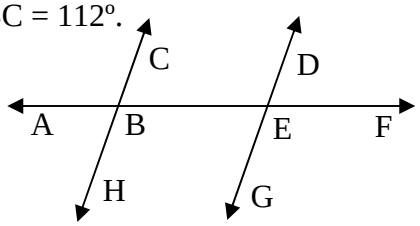
3 **G 17.0** Find the value of the following variables.



4 **G 17.0** Find the value for x.



5 **G 17.0** In the figure shown $\overleftrightarrow{HC} \parallel \overleftrightarrow{GD}$ and m ∠ ABC = 112º.



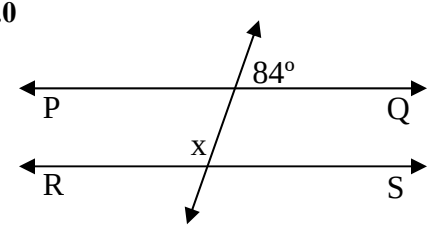
A. Indicate 2 alternate interior angles and find their measures.

B. Indicate 2 alternate exterior angles and find their measures.

C. Indicate 2 corresponding angles and find their measures.

D. Indicate 2 consecutive interior angles and find their measures.

6 **G 17.0** Find m ∠ x in the figure below. $\overleftrightarrow{PQ}$ and $\overleftrightarrow{RS}$ are parallel.



7 **G 1.0** Define deductive reasoning.

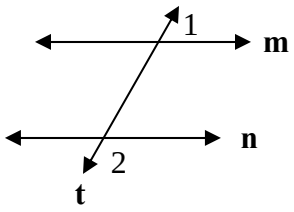
8 **G 16.0** Draw a diagram that contradicts the following:
If two lines cut by a transversal, then alternate interior angles are congruent.

Please continue

9 In the following diagram, parallel lines m and n are cut by a transversal t.

G 1.0

What *must* be true about ∠1 and ∠2?



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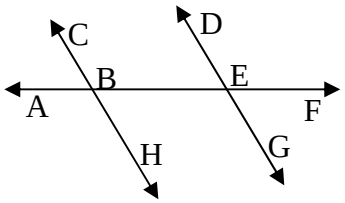
10 In the figure below, m∠BED=119° Lines $\overleftrightarrow{PQ}$ and $\overleftrightarrow{RS}$ are parallel.

G 1.0



Calculate all other angle measures.

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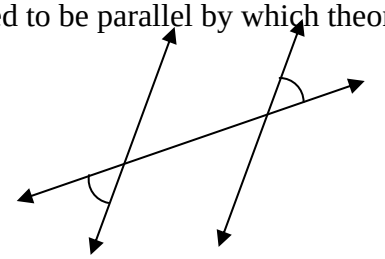
11 Using the figure below, line m and n are guaranteed to be parallel by which theorem?

G 1.0



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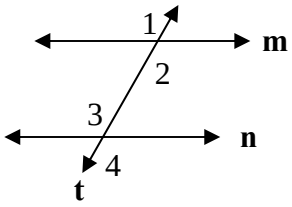
12 In the diagram below, ∠2 ≅ ∠3

G 1.0



Write 4 things that logically follow.

1._____

2._____

3._____

4._____

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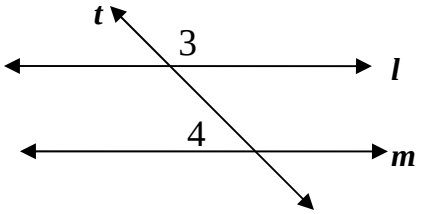
13 In the accompanying diagram, parallel line l and m are cut by a transversal t.

G 1.0



What *must* be true about ∠3 and ∠4?

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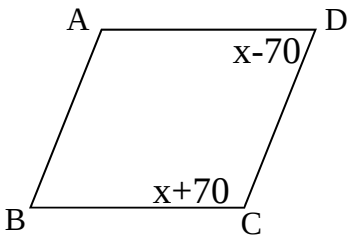
14 In the figure below, $\overleftrightarrow{AB} \parallel \overleftrightarrow{CD}$

G 22.0



Solve for ∠BAD.

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15 ***"All quadrilaterals are squares"***

G 3.0

Describe a *counterexample* to the assertion above.

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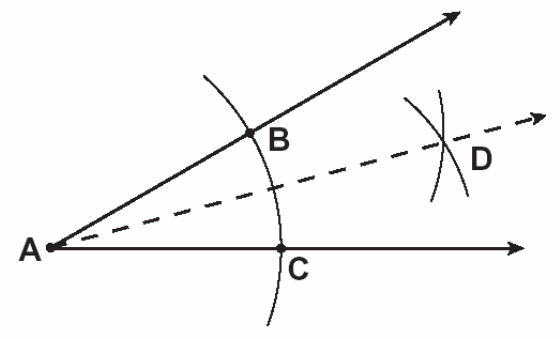
16 What is the distance between the points: (-3, 5) and (7, -1)

G 17.0

Please continue

17 Describe all 3 steps of constructing an angle bisector.

G 16.0



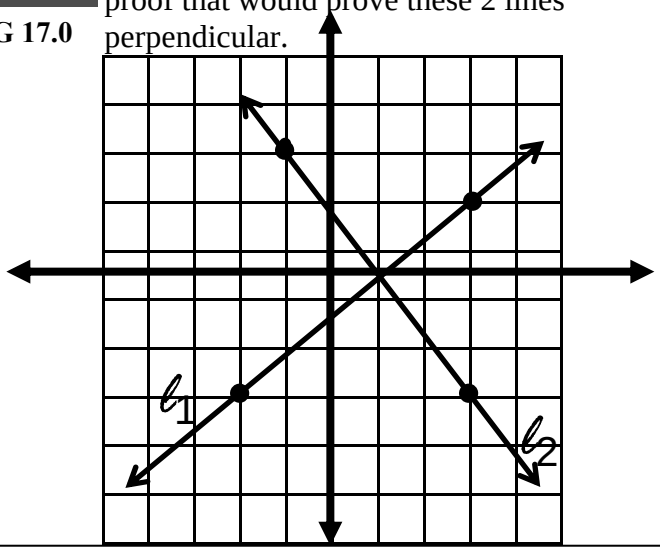
1. _____

2. _____

3. _____

18 Use the graph below. Write a coordinate proof that would prove these 2 lines perpendicular.

G 17.0



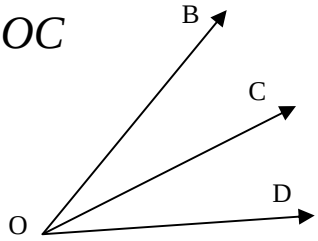
19 Given: $m\angle BOC = 5x + 12$

$m\angle COD = 7x + 6$

$m\angle BOD = 78$

G 1.0

Find: $m \angle BOC$

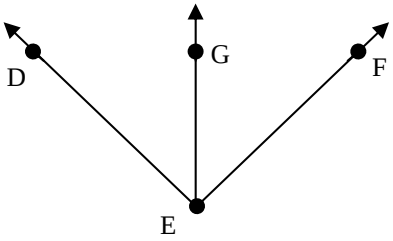


20 Solve for x: In the figure (not drawn to scale), $\overrightarrow{EG}$ bisects $\angle DEF$

G 1.0

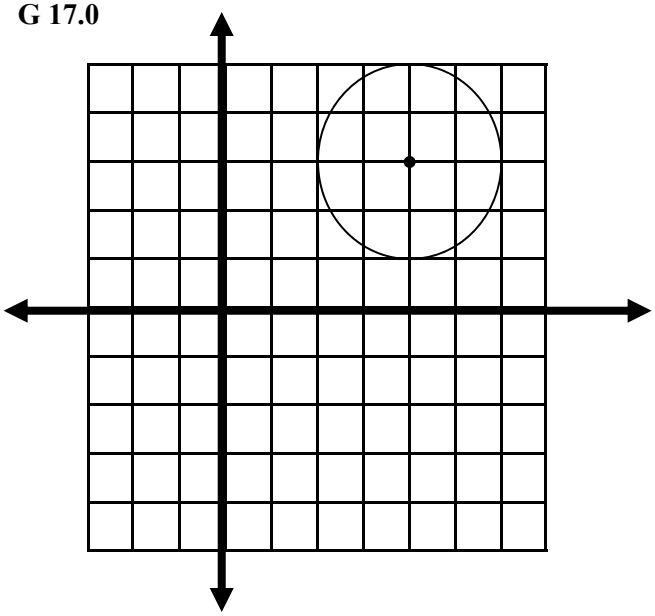
$m\angle DEF = 56$

$m\angle DEG = 5x - 3$



21 Given the graph below. write the equation of the circle?

G 17.0

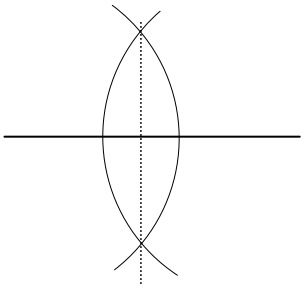


Please continue

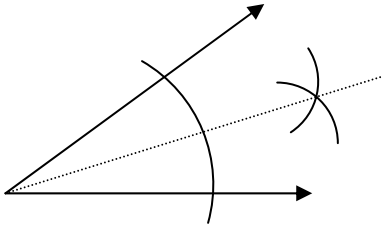
22 Describe what is being constructed in each diagram.

G 3.0

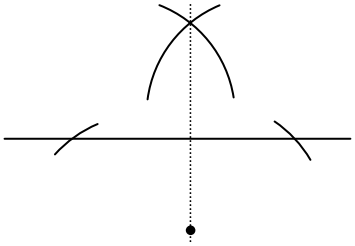
A



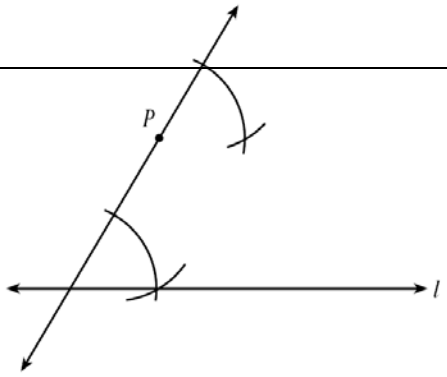
B



C



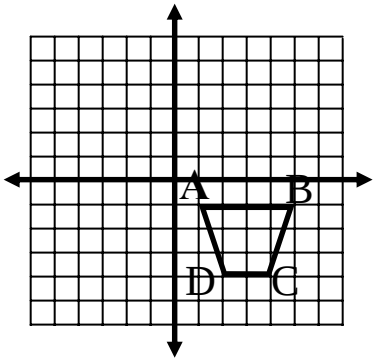
D



23 Trapezoid ABCD below is translated to trapezoid A'B'C'D by the following motion rule:

G 17.0

(x , y) → (x +5, y - 7)



Which are the coordinates of vertex C'?

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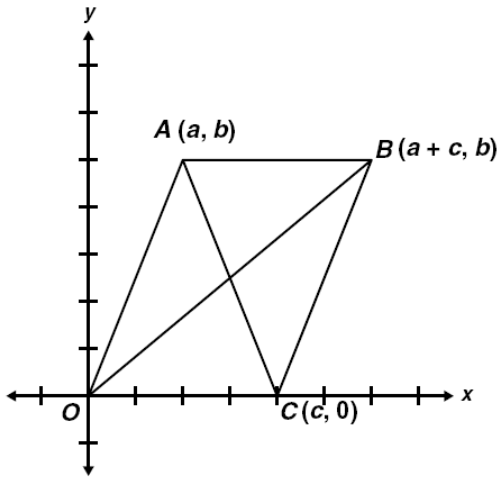
24 Which of the equation below represents the midpoint of $\overline{AB}$?

G 17.0



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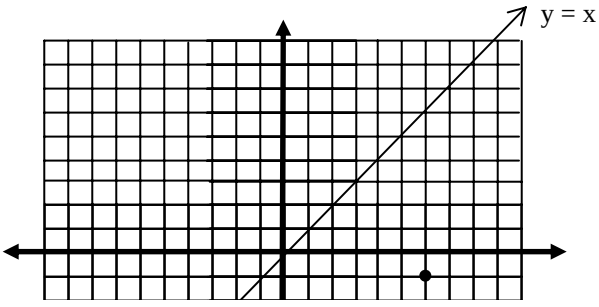
25 Given the point (6, -1). Find the coordinates of a reflection across y = x.

G 22.0

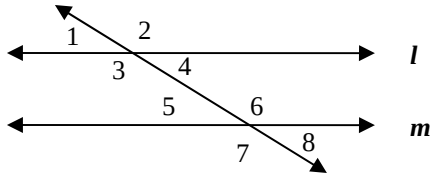


26 Bob says prove the following:
Given: ∠1, ∠2 are supplementary
∠2, ∠3 are supplementary
Prove: ∠1≅∠3

G 1.0

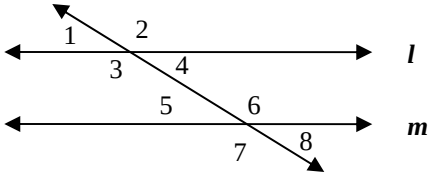
27 Given: l is parallel to m
Prove: ∠1 and ∠6 are supplementary

G 16.0



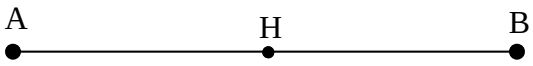
28 Given: ∠2 and ∠5 are supplementary
Prove: l is parallel to m

G 16.0



29 Given: AH = 6 and HB = 6
Prove: H is the midpoint

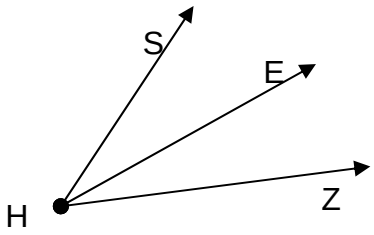
G 13.0



30 Given: m∠SHE= 30
m∠SHZ=60

G 13.0

Prove: m∠EHZ=30



31 Given: l || m

G 13.0 Prove: ∠7 ≅ ∠6

This is a proof on alternate exterior angles. You must use corresponding angles only.