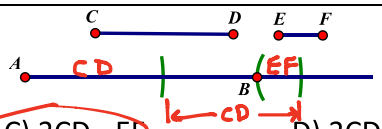
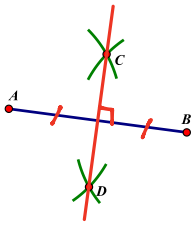
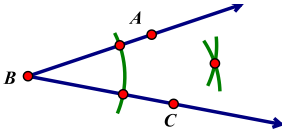
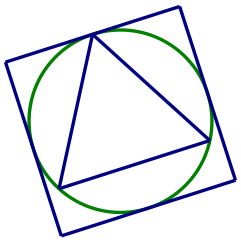
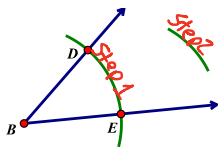
Review (G.CO.1, G.CO.12 & G.CO.13) Name: _____

1. What is the best description for the distance from Point A to Point B?  A) $\overline{AB}$ B) AB C) about 2 cm D) about 1.5 inches	1. B
2. What is the best description for the distance from Point A to Point B?  A) CD + 2EF B) CD - EF C) 2CD - EF D) 2CD + EF	2. C
3. A teacher finds a paper on the ground in the classroom. When she looks at it carefully she realizes it is from her geometry class because it has a construction on it. Choose all of the following constructions found directly from this student's work.  A) The midpoint of $\overline{AB}$ B) The perpendicular bisector of $\overline{AB}$ C) A perpendicular line to $\overline{AB}$ D) The angle bisector of $\angle CAB$	3. A, B, C
4. Which construction is represented by these construction marks?  A) Copying $\angle ABC$ B) The perpendicular bisector of $\overline{BC}$ C) The angle bisector of $\angle ABC$ D) A perpendicular line $\overline{AC}$	4. C
5. When doing a construction, which geometric instrument is used to measure length? A) A ruler B) A compass C) A protractor D) A straightedge	5. B
6. Given the diagram, choose all the descriptions that are true.  A) The circle is inscribed in the square. B) The triangle is inscribed in the circle. C) The square is inscribed in the circle. D) The circle circumscribes the triangle.	6. A, B, D

7. Jeff is constructing the angle bisector of $\angle DBE$. What is the next step? Be very specific as to what he should do next. (2 points)

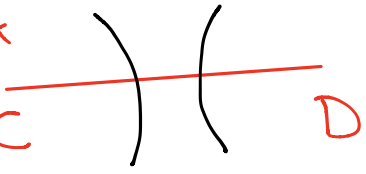


Using the same measure as step 2, place compass point at D and make an arc that intersects the step 2 arc

8. When you do a midpoint construction of $\overline{CD}$, you must stretch your compass so that it is greater than half the distance of $\overline{CD}$. Why do you have to do this? Why couldn't you use a distance smaller than half of $\overline{CD}$? (2 points)

If the distance is less than $\frac{1}{2}$ CD, the arcs will not intersect.

Ex



9. A teacher instructs the class to construct four times the length of a segment. George pulls out his ruler and measures the segment to the nearest millimeter and then multiplies the length by four. He marks this distance from one of the endpoints. Has he done this correctly? Explain. (2 points)

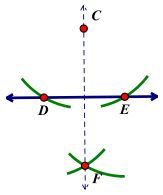
Book

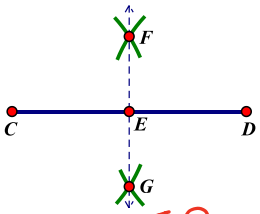
No. "Construct" implies to measure with a compass.
Instead, George "drew" the picture.

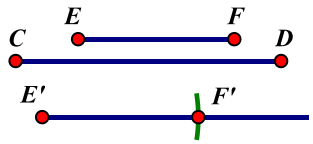
10. George is told that $\overline{AB}$ and $\overline{CD}$ have equal lengths. The student writes down $\overline{AB} = \overline{CD}$. What is wrong with this mathematical statement? (2 points)

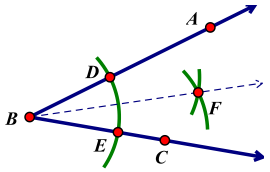
$\overline{AB}$ and $\overline{CD}$ are pictures.
Pictures are congruent.

11. Use the diagram to complete the relationship. (1 point each)
(In diagrams 1, 2 and 4 the compass was constant for each individual construction.)





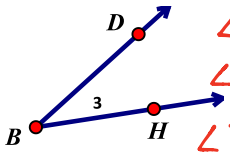




a) DF = EF
b) $\overline{EF} \cong$ DF
c) CE = ED
d) $\overline{ED} \cong$ CE
e) EF = E'F'
f) EF $\cong$ E'F'
g) m∠ABF = m∠FBC
h) $\overline{BE} \cong$ BD

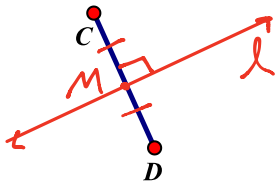
12. Complete the following. (2 points each)

a) Provide all correct names for the angle.



∠3
∠B
∠DBH
∠HBD

b) Draw the perpendicular bisector of $\overline{CD}$. (Completely label the diagram)



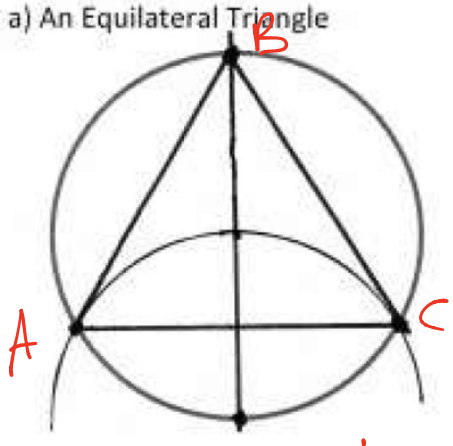
l is the ⊥ bisector of $\overline{CD}$

c) Draw a circle inscribed in a square

d) Draw a hexagon circumscribed about a circle.

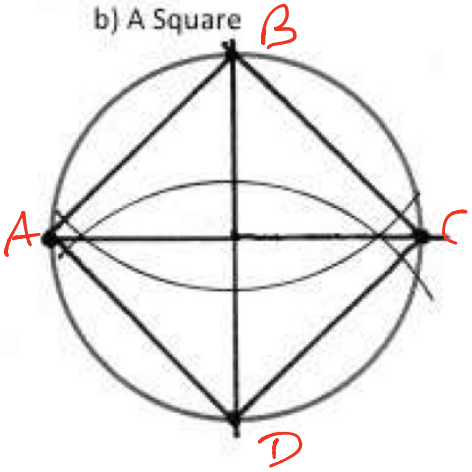
13. Construct the following regular polygons. (2 points each)

a) An Equilateral Triangle



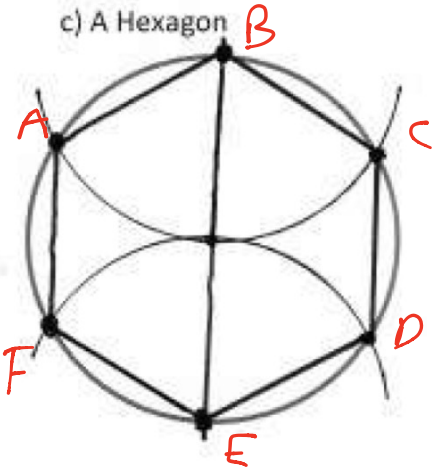
ΔABC is equilateral

b) A Square



ABCD is a square

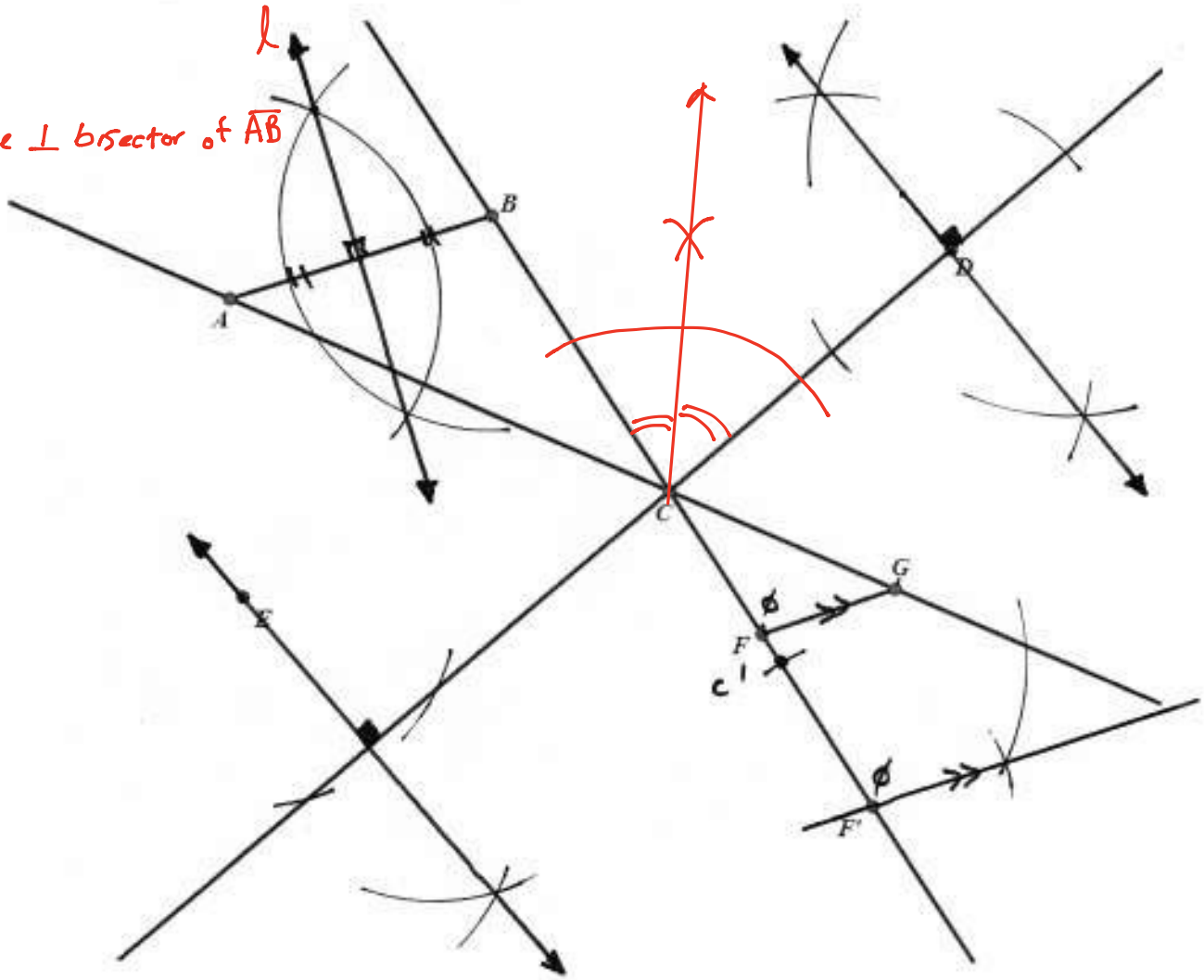
c) A Hexagon



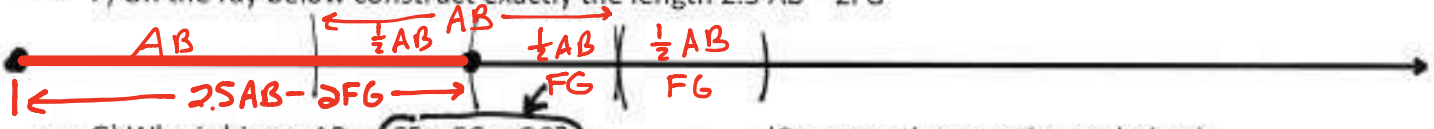
ABCDEF is a hexagon

14. Construct the following. (2 points each)

- A) Construct the perpendicular bisector of $\overline{AB}$
- B) Copy ∠CFG down the ray at F' (thus creating two parallel lines)
- C) Construct the angle bisector of ∠BCD
- D) Construct the perpendicular line to $\overline{CD}$ through point E
- E) Construct the perpendicular line to $\overline{CD}$ through point D



- F) On the ray below construct exactly the length 2.5 AB – 2FG



- G) Who is bigger AB or CF + FG + GC? _____ (Compare them on the ray below)