

KEY

Geometry (H)
Drawing Diagrams

Diagrams are as important in mathematics as blueprints are to a builder. Drawing a diagram before beginning a proof can be a big help in understanding what you are proving. Below is a list of information that you *may* and *may not* assume from a diagram.

Info that may be assumed from a diagram	Info that may not be assumed from a diagram
1. Straight lines	1. Congruent angles or segments
2. Points between other points	2. Measures of angles or segments
3. Collinear or coplanar points	3. Sizes of segments or angles
4. Intersection of lines	4. Midpoint of a segment, bisector of an angle
5. Interior, exterior, opposite	5. Perpendicular lines, right angles
6. Adjacent, nonadjacent angles	6. Parallel lines
7. Existence of figures shown	7. Special types of figures (isosceles, squares, equilateral, rectangles)

1. Using the above list as a guideline, which of the following may be assumed from the given diagram?

1. a. \overleftrightarrow{BG} is a straight line. *yes*
2. b. $\overline{EF} \cong \overline{FG}$ *NO*
3. c. Pt. E is between D and F. *yes*
4. d. $\angle DEB \cong \angle EFG$ *NO*
5. e. $\angle EFG$ is a right angle. *NO*
6. f. $\angle BEF$ is obtuse. *NO*
7. g. C is in the interior of $\angle DEB$ *yes*
8. h. E is the midpoint of \overline{DF} . *NO*
9. i. $\angle EGH$ is adjacent to $\angle HGJ$. *yes*
10. j. \overline{GH} is the bisector of $\angle EGJ$. *NO*
11. k. \overline{EF} , \overline{FG} , and \overline{EG} form a triangle. *yes*

