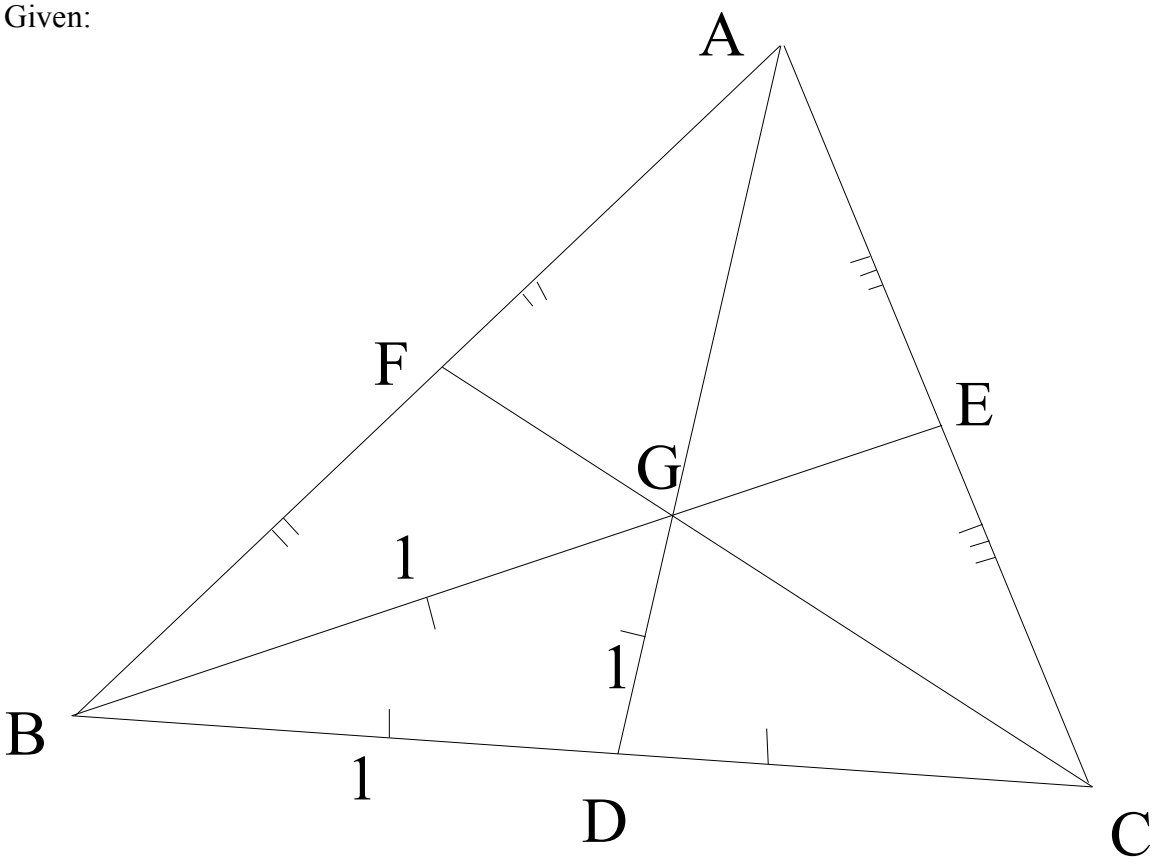
Given:



Definition of Median

$$\overline{BD} \approx \overline{DC}$$
$$\overline{BD} = 1$$

ΔBDG is equilateral.

$$\measuredangle BGD = 60^{o}$$
$$\measuredangle BDG = 60^{o}$$
$$\measuredangle GBD = 60^{o}$$

Straight Angles

$$\measuredangle CDG = 120^{o}$$

Law of Cosines

$$\overline{CG} = \sqrt{3}$$
$$\measuredangle DGC = 30^o$$

Opposite Angles

$$\measuredangle AGE = 60^o$$
$$\measuredangle AGF = 30^o$$

Straight Angles

$$\measuredangle FGB = 90^o$$
$$\measuredangle EGC = 90^o$$

The ratio of the larger segment to the smaller segment of a median divided by the centroid is 2:1.

$$\overline{EG} = \frac{1}{2}$$
$$\overline{FG} = \frac{\sqrt{3}}{2}$$
$$\overline{AG} = 2$$

Law of Cosines

$$\overline{AE} = \frac{\sqrt{13}}{2}$$
$$\overline{EC} = \frac{\sqrt{13}}{2}$$
$$\overline{AF} = \frac{\sqrt{7}}{2}$$
$$\overline{BF} = \frac{\sqrt{7}}{2}$$

Sums of the parts of the segments equal the wholes.

$$\overline{AB} = \sqrt{7}$$
$$\overline{BC} = \sqrt{13}$$
$$\overline{CA} = 2$$