

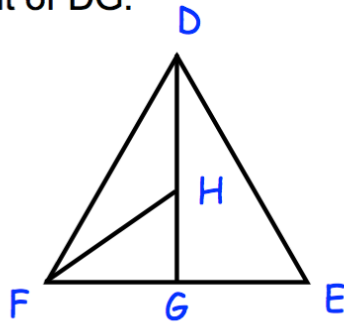
April 17th

DEF is an equilateral triangle with side DE = 16cm.

G is the midpoint of EF.

H is the midpoint of DG.

Find FH.



$$DG^2 = DE^2 - GE^2$$

$$DG = \sqrt{16^2 - 8^2} = \sqrt{192} = 8\sqrt{3} \text{ cm}$$

Therefore

$$HG = 4\sqrt{3} \text{ cm}$$

$$FH^2 = FG^2 + HG^2$$

$$FH = \sqrt{8^2 + (4\sqrt{3})^2} = \sqrt{112} = 4\sqrt{7} \text{ cm}$$