MATH LEAGUE 8TH WEEK SOLUTIONS:

CALCULATING THE RED ANGLE VALUE:

1-

WE KNOW THAT THE SUM OF THE MEASURES OF TWO COMPLEMENTARY ANGLES IS 180° AND THAT THE SUM OF THE MEASURES OF THE ANGLES OF A TRIANGLE IS 180°.

GHF=180°-135°=45°

HGF=180°-105°=75°

HFG=180°-45°-75°=60°

HFG=DFC=60°

FDC=180°-119°=61°

DCF=180°-61°-60°=59°

ACB=180°-59°= 121°

ABC=180°-121°-40°

ABC=19°

CALCULATING CG:

-2

FIRST: WE HAVE (BD) PERPENDICULAR TO AND (BH), AND FROM IT (CE) IS (CE) PARALLEL TO (BH), AND FROM IT

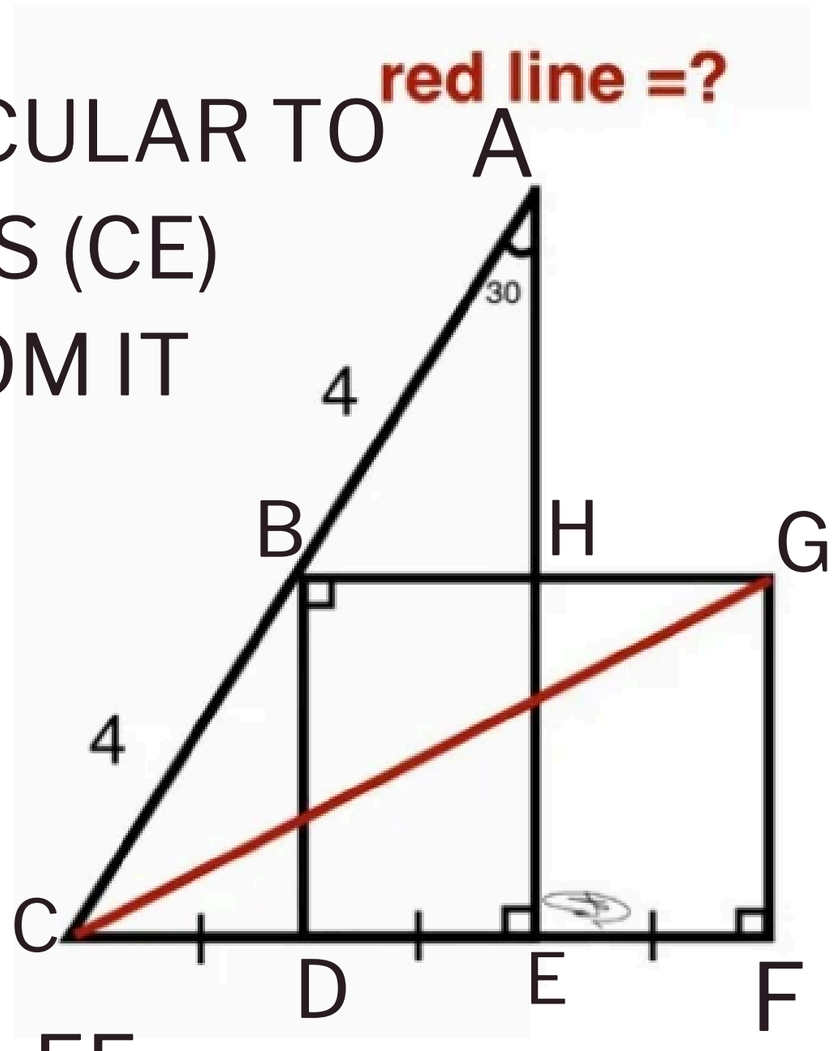
2BH=XC

AND 4×BH= COS 60°

SO BH=2.3CM

THEN 2.3×CE=2

SO CE=4.6CM



SECOND: 2CD=CE AND CD=EF

CE+CD=CF

CF=4.6+2.3=6.9CM

THIRD: BGFD IS A RECTANGLE SO BD=GF
ACCORDING TO THE PYTHOGRIEN THEOREM
BC^2 -CD^2 =BD^2
BD= 3.2CM

FOURTH: ACCORDING TO THE PYTHOGRIEN THEOREM IN THE TRIANGLE CGF
FG^2+ CF^2= CG^2
CG= 7.6CM