Rommel Rico - USD

Problem 2 - Week of September 22, 2014

Solution:

We know that 260 = (A^2 + B^2) = (F^2 + G^2) and that the sum of any 2 adjacent squares is the same as the sum of the squares of the 2 at the opposite side of the diagram, therefore from the diagram:

2^2 + C^2 = 260 14^2 + H^2 = 260.

C^2 = 260-4 H^2 = 260 - 196

C^2 = 256 H^2 = 64

C = 16 H = 8

With C and H solved, we similarly solve for D and I:

16^2 + D^2 = 260 8^2 + I^2 = 260

D^2 = 260 - 256 I^2 = 260 - 64

D^2 = 4 I^2 = 196

D = 2 I = 14

We similarly solve for K and E:

2^2 + E^2 = 260 14^2 + K^2 = 260

E^2 = 260 - 4 K^2 = 260 - 196

E^2 = 256 K^2 = 64

E = 16 K = 8

Answer:

A = 16, B = 2, C = 16, D = 2, E = 16, F = 8, G = 14, H = 8, I = 14, K = 8.