



Diagram illustrating a geometric construction involving a triangle and its medians. The diagram shows a triangle with vertices A, B, and C. A point D is marked on the side BC, and a line segment AD is drawn. The diagram is labeled with various points and lines, including A, B, C, D, E, F, G, H, I, J, K, L, M, N, O, P, Q, R, S, T, U, V, W, X, Y, Z, and lines like AB, BC, CA, AD, BE, CF, etc.

Equations and text on the chalkboard:

$AD = \frac{2}{3} AE$
 $BE = \frac{2}{3} BF$
 $CF = \frac{2}{3} CG$
 $AD^2 + BE^2 + CF^2 = 3(GA^2 + GB^2 + GC^2)$
 $AD^2 + BE^2 + CF^2 = 3(GA^2 + GB^2 + GC^2)$
 $AD^2 + BE^2 + CF^2 = 3(GA^2 + GB^2 + GC^2)$

Diagram illustrating a geometric construction involving a triangle and its medians. The diagram shows a triangle with vertices A, B, and C. A point D is marked on the side BC, and a line segment AD is drawn. The diagram is labeled with various points and lines, including A, B, C, D, E, F, G, H, I, J, K, L, M, N, O, P, Q, R, S, T, U, V, W, X, Y, Z, and lines like AB, BC, CA, AD, BE, CF, etc.

Equations and text on the chalkboard:

$AD = \frac{2}{3} AE$
 $BE = \frac{2}{3} BF$
 $CF = \frac{2}{3} CG$
 $AD^2 + BE^2 + CF^2 = 3(GA^2 + GB^2 + GC^2)$
 $AD^2 + BE^2 + CF^2 = 3(GA^2 + GB^2 + GC^2)$
 $AD^2 + BE^2 + CF^2 = 3(GA^2 + GB^2 + GC^2)$