

$\vec{AM} = \lambda \vec{MB} \quad \vec{DN} = \mu \vec{NC}$

$\frac{65}{12} Q = \left(1A + \frac{3}{2}P\right) + \left(10 + \frac{2}{3}P\right) + \left(1C + \frac{1}{4}P\right) = \frac{5}{2}A_1 + \frac{5}{2}A_1 + \frac{5}{4}C_1$

$\left(\frac{1}{c} + \frac{1}{d}\right)P \quad |AP| = |AQ| = a \quad |DP| = |DT| = m \quad \vec{CL} = \alpha \vec{CA}$

$|PQ| = \frac{36}{65}|PM| \quad |AM| : |MC| = 3:1$

$|AP| = |AQ| + |QP| = 10/|QP|$

$1A + \mu P + \nu Q = (1 + \mu + \nu)M$

$P = \frac{1A + 2F + 1C + 10F}{14} = \frac{(1A + 1C) + (2F + 10F)}{14}$

$Z = \frac{1A + 3C + 6B}{10} = \frac{(1A + 3C) + 6B}{10}$

$\vec{CL} = \alpha \vec{CA} \quad P = \frac{(2A + 3B) + 8C}{13} = \frac{5D + 8C}{13} \Rightarrow P \in [CD]$

$Z = \frac{PA + QD + 1C}{P + Q + 1} = \frac{PA + (QB + 1C) + QD}{P + Q + 1} = 5|Q|$

$(m_1 + m_2 + \dots + m_n)Z = m_1A_1 + m_2A_2 + \dots + m_nA_n$

$Z \in [AM] \Rightarrow T \in [AM]$

$P = \frac{\alpha}{1-\alpha} \frac{1}{9} D$

$\frac{|AZ|}{|ZP|} = \left(\frac{1}{c} + \frac{1}{d}\right) \cdot \left(\frac{1}{a} + \frac{1}{b}\right)$

$\frac{|AZ|}{|ZQ|} = \left(\frac{1}{a} + \frac{1}{d}\right) \cdot \left(\frac{1}{b} + \frac{1}{c}\right) = \frac{(a+d)b}{(b+c)d}$

$Z = \frac{m_1A_1 + \dots + m_nA_n}{m_1 + \dots + m_n}$

$\vec{AC}_1 = \frac{1}{3}\vec{AB} \quad \vec{BC}_1 = \frac{1}{3}\vec{BC} \quad \vec{CC}_1 = \frac{1}{3}\vec{CA}$

$\vec{CL} = \alpha \vec{CA} + (1-\alpha)\vec{CC}_1$

$|DP| : |PC| = 1:2 \quad |AM| : |MC| = 3:1$

$|AP| = \frac{5}{2}|A_1P|$

$\frac{5}{3}B_1 = 10 + \frac{2}{3}P \quad \frac{5}{4}C_1 = 1C + \frac{1}{4}P \quad Z = \frac{(10 + 5A)}{14}$

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