



ΠΑΝΕΠΙΣΤΗΜΙΟ
ΔΥΤΙΚΗΣ ΑΤΤΙΚΗΣ
UNIVERSITY OF WEST ATTICA

ΚΑΘΗΓΗΤΗΣ: ΓΕΩΡΓΙΟΣ ΣΦΗΚΑΣ

ΑΣΚΗΣΗ 1 ΦΩΤΟΓΡΑΜΜΕΤΡΙΑ

ΟΝΟΜΑΤΕΠΩΝΗΜΟ: ΜΑΚΡΗΣ ΑΘΑΝΑΣΙΟΣ

ΑΡΙΘΜΟΣ ΜΗΤΡΩΟΥ: 20391045

Реш.

$$P_1(2, -3, 3) \quad P_2(2, -4, 6) \quad P_3(1, 1, 1) \quad P_4(3, -1, -3)$$

$$a) d_{12} = \sqrt{(x_2 - x_1)^2 + (y_2 - y_1)^2 + (z_2 - z_1)^2} = \sqrt{0 + 1^2 + 3^2} = \sqrt{10} \approx 3,16$$

$$d_{23} = \sqrt{(1 - 2)^2 + (1 + 4)^2 + (1 - 6)^2} = \sqrt{51} \approx 7,14$$

$$d_{34} = \sqrt{(3 - 1)^2 + (-1 - 1)^2 + (-3 - 1)^2} = \sqrt{24} = 2\sqrt{6} \approx 4,9$$

$$d_{14} = \sqrt{(3 - 2)^2 + (-1 + 3)^2 + (-3 - 3)^2} = \sqrt{41} \approx 6,4$$

$$d_{13} = \sqrt{(1 - 2)^2 + (1 + 3)^2 + (1 - 3)^2} = \sqrt{21} \approx 4,58$$

$$d_{24} = \sqrt{(3 - 2)^2 + (-1 + 4)^2 + (-3 - 6)^2} = \sqrt{1 + 9 + 81} = \sqrt{91} \approx 9,54$$

$$б) \text{ найти расстояние } (0, 0, 0) \text{ от}$$

$$d_{10} = \sqrt{(0 - 2)^2 + (0 + 3)^2 + 3^2} = \sqrt{4 + 9 + 9} = \sqrt{22}$$

$$d_{20} = \sqrt{2^2 + 4^2 + 6^2} = \sqrt{4 + 16 + 36} = \sqrt{56}$$

$$d_{30} = \sqrt{1^2 + 1^2 + 1^2} = \sqrt{3}$$

$$d_{40} = \sqrt{3^2 + 1^2 + 3^2} = \sqrt{9 + 9 + 1} = \sqrt{19}$$

г) преобраз.

$$P_1' \left(\frac{x_1}{z_1}, \frac{y_1}{z_1} \right)$$



$$P_1' \left(\frac{1 \cdot 2}{3}, \frac{-3}{3} \right)$$



$$P_1' \left(\frac{2}{3}, -1 \right)$$

$$P_2' \left(\frac{x_2}{z_2}, \frac{y_2}{z_2} \right)$$



$$P_2' \left(\frac{2}{6}, \frac{-4}{6} \right)$$



$$P_2' \left(\frac{1}{3}, -\frac{2}{3} \right)$$

$$P_3' \left(\frac{x_3}{z_3}, \frac{y_3}{z_3} \right)$$



$$P_3' \left(\frac{1}{1}, \frac{1}{1} \right)$$



$$P_3' (1, 1)$$

$$P_4' \left(\frac{x_4}{z_4}, \frac{y_4}{z_4} \right)$$



$$P_4' \left(\frac{3}{-3}, \frac{-1}{-3} \right)$$

$$P_4' (-1, \frac{1}{3})$$

Ανάλυση γραμμών επίπεδων στο \mathbb{R}^3

$$P_1'(2, -1) \quad P_2'\left(\frac{1}{3}, -\frac{2}{3}\right) \quad P_3'(1, 1) \quad P_4'(-1, \frac{1}{3})$$

~~Ανάλυση~~

~~Ανάλυση~~

$$\text{Για } P_1: \frac{x}{2} = 2 \text{ και } \frac{y}{-1} = -1 \quad \text{Για } P_2: \frac{1}{3} = \frac{x}{2} \Rightarrow 3x = 2$$

$$\text{για } P_3: 2z = x \quad -2z = y \quad \frac{-2}{3} = \frac{y}{2} \Rightarrow 3y = -2$$

$$P_1''(4, 2, -2)$$

$$P_2''(3, -3, 9)$$

$$P_3''(2, 2, 2) \Rightarrow x = z = y$$

$$P_4''(6, -2, -6) \Rightarrow \text{Εξίσωση } -x = 2 \text{ και } 3y = -2$$

Ανάλυση

$$P_1''(4, 2, -2)$$

$$P_2''(3, -3, 9)$$

$$P_3''(2, 2, 2)$$

$$P_4''(6, -2, -6)$$

●	P2 = (2, -4, 6)	≡	
●	P3 = (1, 1, 1)	:	
●	P4 = (3, -1, -3)	:	
●	P1' = (2, -1)	:	
●	P2' = $\left(\frac{1}{3}, -\frac{2}{3}\right)$:	
	= (0.33, -0.67)	:	
●	P3' = (1, 1)	:	
●	P4' = $\left(-1, -\frac{1}{3}\right)$:	
	= (-1, -0.33)	:	
●	f = Tριγων(P2, P1)	:	
	= 3.16	:	
●	g = Tριγων(P4, P1)	:	
	= 6.4	:	
●	h = Tριγων(P2, P4)	:	
	= 9.54	:	
●	i = Tριγων(P1, P3)	:	
	= 4.58	:	
●	j = Tριγων(P3, P4)	:	
	= 4.9	:	
●	k = Tριγων(P3, P2)	:	
	= 7.14	:	
+	Εισαγωγή...	:	

