2) Data kadar trigliserida pria dewasa gemuk dan normal yang diukur dengan Indeks Massa Tubuh (IMT) sebagai berikut (data fiktif)

Subjek	Gemuk x_1	Normal x_2	$D = X_1 - X_2$	$d_1 = x_1 - \bar{x}_1$	$d_2 = x_2 - \bar{x}_2$	d_1^2	d_2^2
1	240	180	60	1	4	1	16
2	260	175	85	21	-1	441	1
3	230	160	70	-9	-16	81	256
4	220	190	30	-19	14	361	196
5	260	180	80	21	4	441	16
6	250	175	75	11	-1	121	1
7	240	190	50	1	14	1	196
8	220	170	50	-19	-6	361	36
9	230	180	50	-9	4	81	16
10	240	160	80	1	-16	1	256
Total	2390	1760	630	0	0	1890	990

∴ Rerata $D(\bar{D}) = \frac{D}{n} = \frac{630}{10} = 63$ //

Rerata $X_1(\bar{X}_1) = \frac{2390}{10} = 239$ //

Rerata $X_2(\bar{X}_2) = \frac{1760}{10} = 176$ //

∴ Standard Deviasi

$Sd_1 = \sqrt{Sd_1^2} = \sqrt{210} = 14,49$ //

$Sd_2 = \sqrt{Sd_2^2} = \sqrt{110} = 10,49$ //

$$Sp = \sqrt{\frac{(n-1)(Sd_1^2) + (n-1)(Sd_2^2)}{n_1 + n_2 - 2}}$$

$$= \sqrt{\frac{(10-1)(210) + (10-1)(110)}{10+10-2}}$$

$$= \sqrt{\frac{1890 + 990}{18}} = \sqrt{160} = 12,65$$

∴ Variance

$$Sd_1^2 = \frac{1}{n-1} \sum_{i=1}^{n} (x_1 - \bar{x}_1)^2$$

$$= \frac{1}{10-1} (1890) = 210$$ //

$$Sd_2^2 = \frac{1}{n-1} \sum_{i=1}^{n} (x_2 - \bar{x}_2)^2$$

$$= \frac{1}{10-1} (990) = 110$$ //

∴ Uji t

$$t = \frac{(\bar{x}_1 - \bar{x}_2)}{Sp\sqrt{\frac{1}{n_1} + \frac{1}{n_2}}} = \frac{(239 - 176)}{12,65\sqrt{\frac{1}{10} + \frac{1}{10}}} = \frac{63}{12,65(\sqrt{0,2})}$$

$$= \frac{63}{5,66} = 11,13$$ //

$dk = n_1 + n_2 - 2 = 10 + 10 - 2 = 18$ //

∴ kesimpulan Statistika

t hitung > t table → maka, H_0 ditolak

11,13 > 1,734

∴ kesimpulan

ada perbedaan kadar trigliserida pria dewasa gemuk dan pria dewasa normal yang diukur dengan Indeks Massa Tubuh (IMT)