

Ulangan Harian

Nama: Piesty Anastasia E. Wiwaron

Kelas : XII MIPA 3

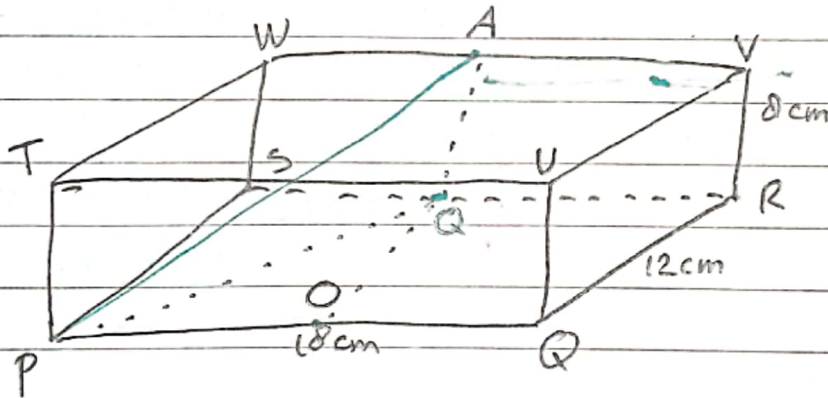
1. e.

2. d.

3. d.

4. e.

5.



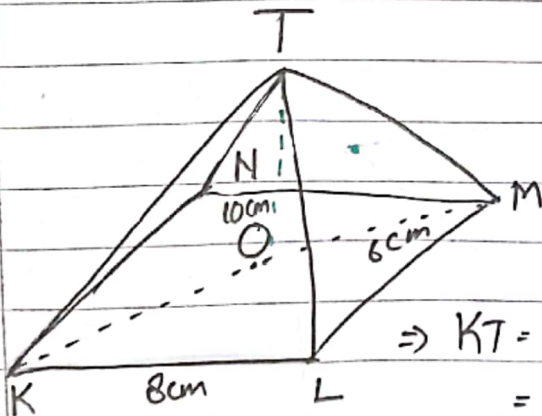
$$PO = 9 \Rightarrow PQ = \sqrt{9^2 + 12^2} \Rightarrow AP = \sqrt{15^2 + 8^2}$$

$$OQ = 12 \quad = \sqrt{81 + 144} \quad = \sqrt{225 + 64}$$

$$\quad = \sqrt{225} \quad = \sqrt{289}$$

PQ = 15

AP = 17
= (b.)



$$\Rightarrow KT = \sqrt{5^2 + 10^2}$$

$$= \sqrt{25 + 100}$$

$$= \sqrt{125}$$

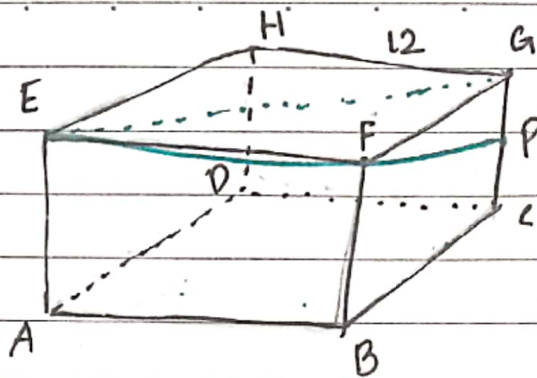
KT = 5√5 (a.)

$$\Rightarrow KM = \sqrt{8^2 + 6^2}$$

$$= \sqrt{64 + 36}$$

$$= \sqrt{100} = 10$$

7



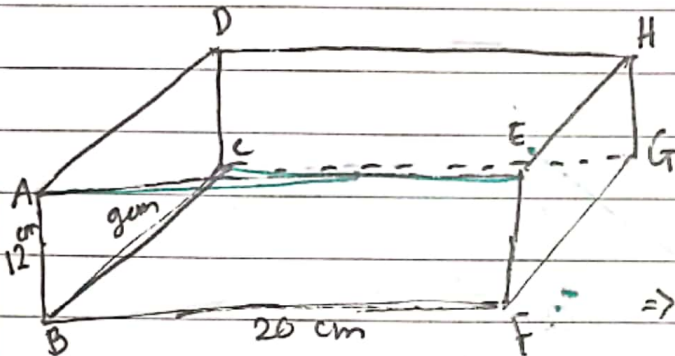
$$EP = \sqrt{(12\sqrt{2})^2 + 6^2}$$

$$= \sqrt{144 \cdot 2 + 36}$$

$$= \sqrt{324}$$

$$EP = 18 \quad (\text{d.})$$

8.



$$\Rightarrow AC = \sqrt{12^2 + 9^2}$$

$$= \sqrt{144 + 81}$$

$$= \sqrt{225} = 15$$

$$\Rightarrow EC = \sqrt{20^2 + 15^2}$$

$$= \sqrt{400 + 225} = \sqrt{625}$$

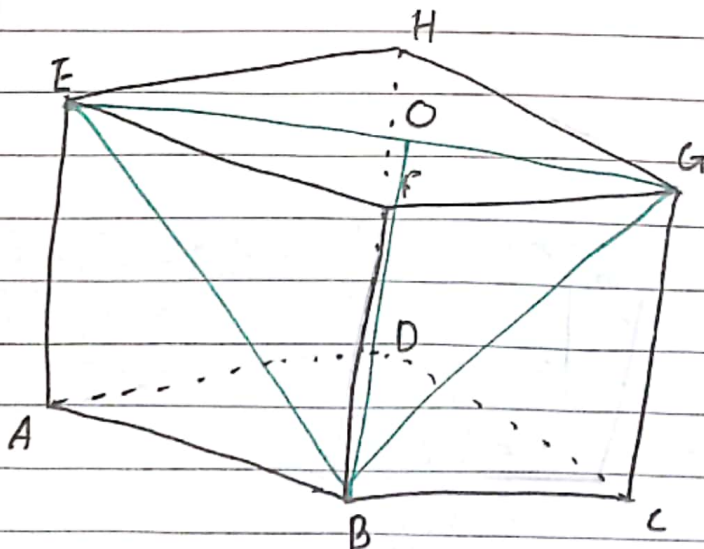
$$EC = 25$$

 $\triangle EAC$

\Rightarrow jarak A ke EC = ~~20~~

$$\Rightarrow \frac{20}{4} \times \frac{15}{3} = 12 \text{ cm} \quad (\text{b.})$$

9.



$$BO = \sqrt{(8\sqrt{2})^2 + (4\sqrt{2})^2}$$

$$= \sqrt{64 \cdot 2 + 16 \cdot 2}$$

$$= \sqrt{96}$$

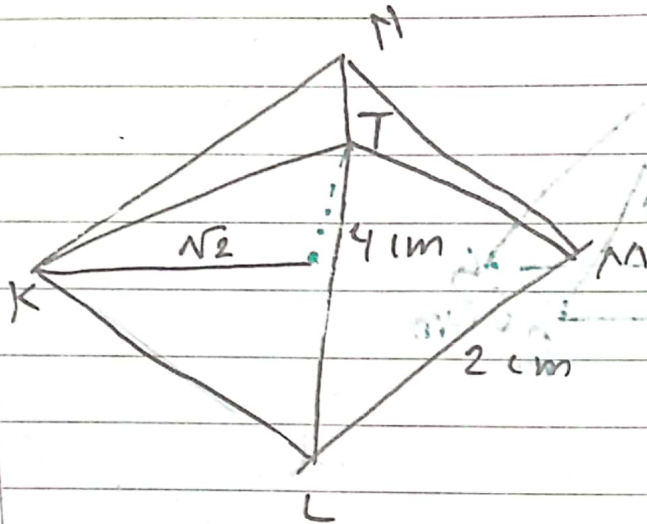
$$BO = 4\sqrt{6}$$

\Rightarrow (c.)

No. _____

Date: _____

10.

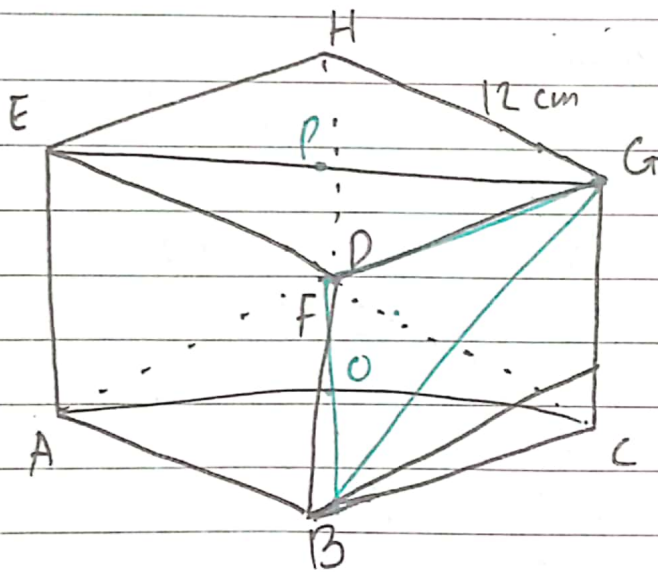


$$TO = \sqrt{4^2 - (\sqrt{2})^2}$$
$$= \sqrt{16 - 2} = \sqrt{14}$$

Jarak k ke TM

$$= \sqrt{14} \cdot \frac{2\sqrt{2}}{4}$$
$$= \sqrt{7} \quad \text{(a.)}$$

11.



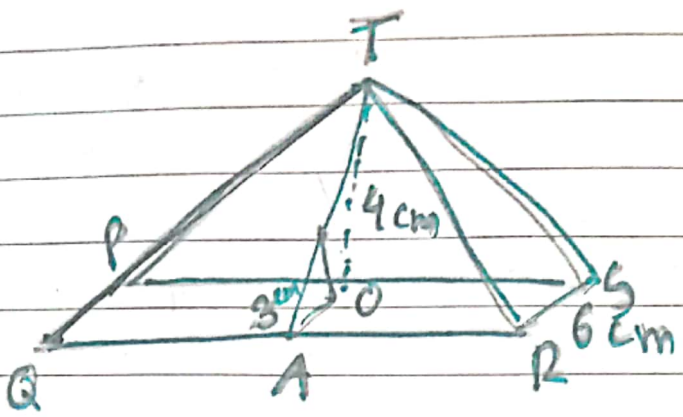
Jarak P ke BDG

$$= OP \times \frac{PG}{OG}$$
$$= 12 \cdot \frac{6\sqrt{2}}{6\sqrt{6}}$$
$$= 12 \cdot \frac{\sqrt{2}}{\sqrt{6}}$$
$$= \cancel{12} \cdot \frac{\sqrt{12}}{2} = 2\sqrt{4} \times \sqrt{3}$$
$$= 2 \cdot 2 \times \sqrt{3} = 4\sqrt{3} \quad \text{(e.)}$$

12

S T

12.



$$TA = \sqrt{9+16}$$

$$= \sqrt{25}$$

$$TA = 5$$

luas ΔTOA dengan alas 3 = $\frac{1}{2} \cdot 3 \cdot 4 = 6$

luas ΔTOA dengan alas 5 dan tingginya merupakan jarak titik O ke bidang TQR

$l_{\Delta TOA}$ dengan $A=3 \Rightarrow l_1$
 $l_{\Delta TOA}$ dengan $A=5 \Rightarrow l_2$

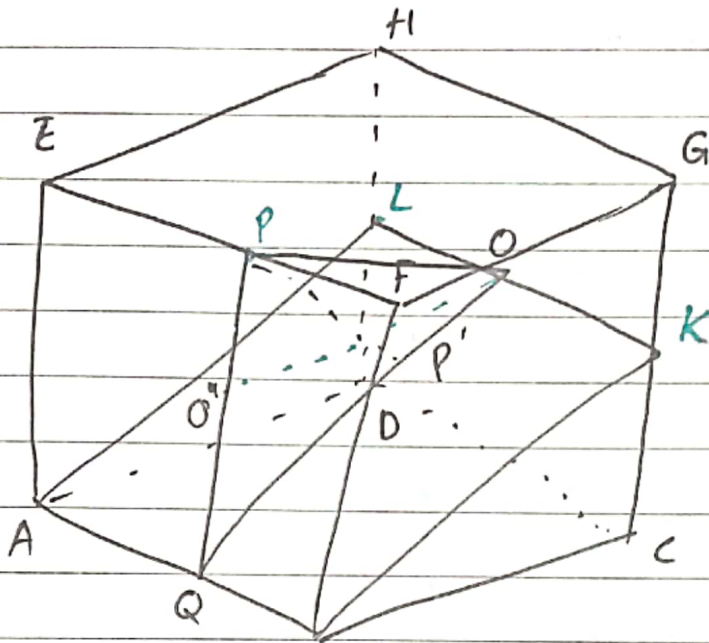
~~$l_1 = l_2$~~
 ~~$6 = \frac{1}{2} \cdot 5 \cdot t$~~

$l_1 \neq l_2$
 $6 = \frac{1}{2} \cdot 5 \cdot t$

$6 = 2,5T$

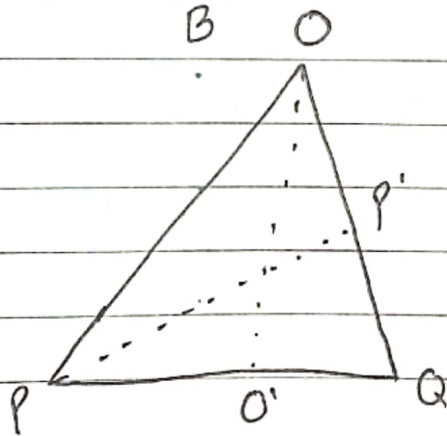
$\underline{\underline{2,4}} \Leftarrow \frac{6}{2,5} = T$
 a.

13.



$$PQ = 10 \text{ cm}$$

$$PO = OQ = 5\sqrt{5}$$



$$OO' = \sqrt{(5\sqrt{5})^2 - 5^2}$$

$$= \sqrt{25 \cdot 5 - 25}$$

$$= \sqrt{100} = 10$$

$$l_1 = \triangle POQ \quad a = 10$$

$$l_2 = \triangle POQ \quad a = 5\sqrt{5}$$

$$l_2 = l_1$$

$$\frac{1}{2} \cdot 5\sqrt{5} \cdot t = \frac{1}{2} \cdot 10 \cdot 10$$

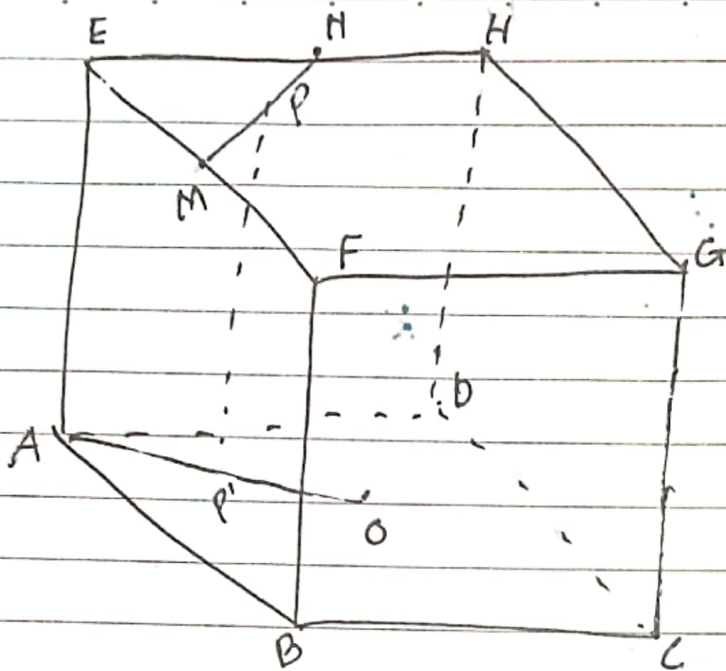
$$\frac{1}{2} 5\sqrt{5} t = 50$$

$$t = \frac{50}{\frac{5\sqrt{5}}{2}} \Rightarrow 50 \cdot \frac{2}{5\sqrt{5}}$$

$$t = \frac{100}{5\sqrt{5}} = \frac{20 \times \sqrt{5}}{\sqrt{5} \times \sqrt{5}}$$

$$t = \underline{\underline{4\sqrt{5}}} \quad \text{(d.)}$$

14.



Jarak garis MN terhadap garis BD -

= OP

$$= \sqrt{r^2 + \left(\frac{1}{4} r\sqrt{2}\right)^2}$$

$$= \sqrt{r^2 + \frac{2}{16} r^2}$$

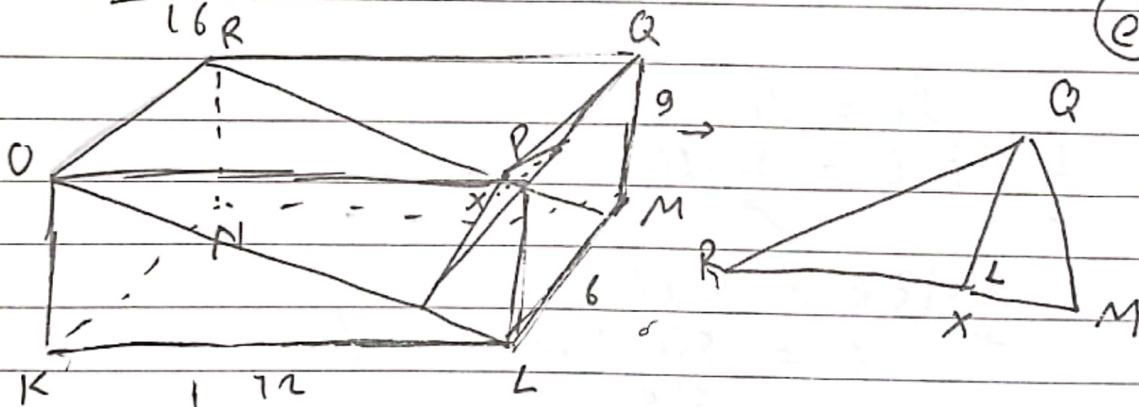
$$= \sqrt{\frac{16+2}{16} r^2}$$

$$= \sqrt{\frac{18}{16} r^2}$$

$$= \frac{3}{4} r\sqrt{2} = 9\sqrt{2} \text{ cm}$$

(e.)

15.



$$RM = \sqrt{12^2 + 9^2} = \sqrt{225} = 15$$

$$L_{\Delta MRQ} = L_{\Delta MQR}$$

$$\frac{1}{2} \cdot 12 \cdot 9 = \frac{1}{2} \cdot 15 \cdot QR$$

$$QR = \frac{12 \cdot 9}{15}$$

$$= \frac{36}{5} = 7,2$$

(d.)