

JAWAPAN



Pelan dan Dongakan Plans and Elevations

1. (a) ABCD: FA, GB, HC, ED
 (b) ADEF: BA, CD, HE, GF
 (c) ABGF: DA, CB, HG, EF

2. (a)

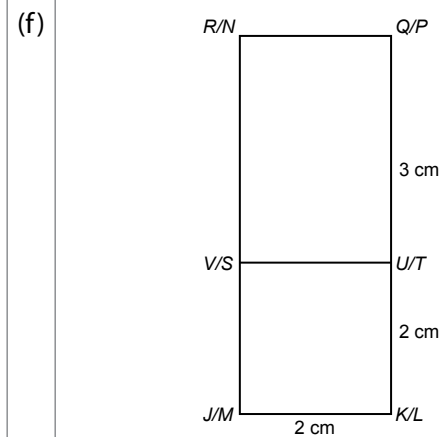
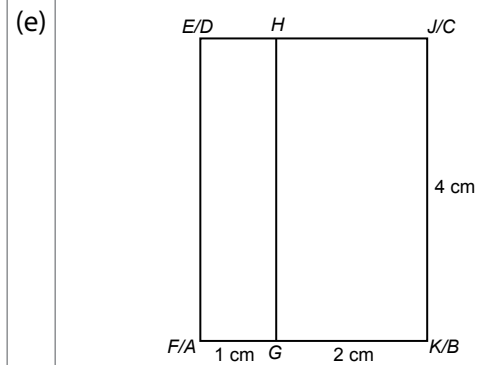
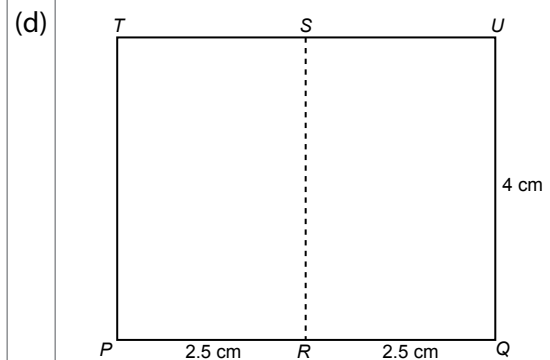
(b)

(c)

3. D

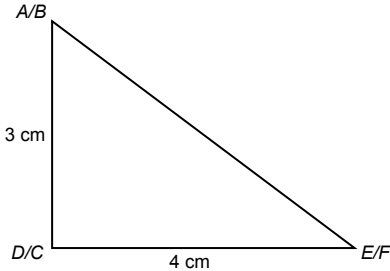
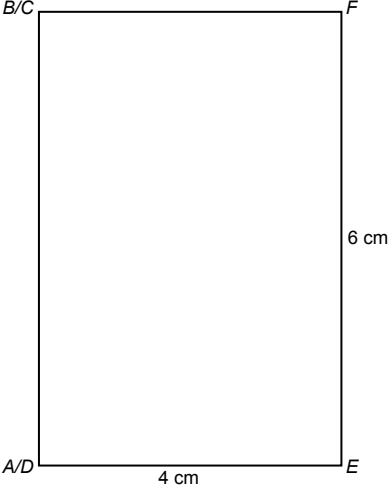
4.

	Unjuran ortogon Orthogonal projection
(a)	
(b)	
(c)	



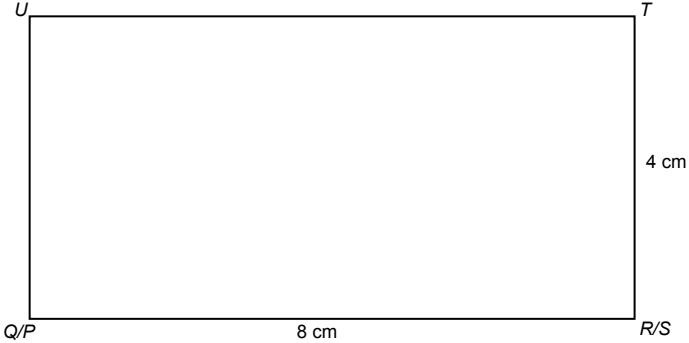
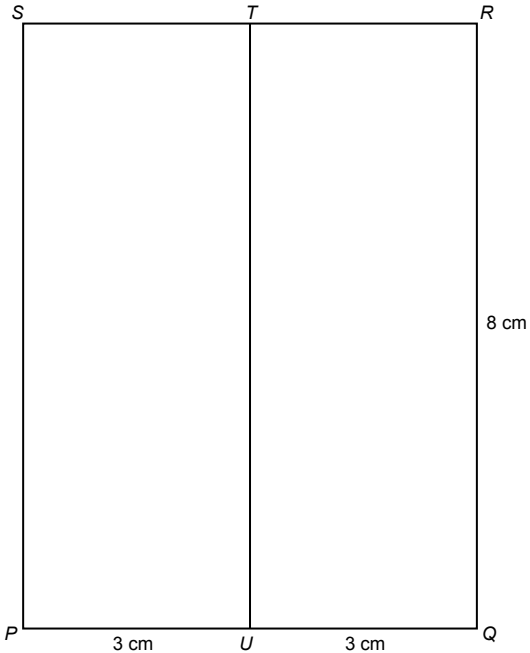
5. (a) ☒
- (b) ☒
- (d) ☒

6. (a)

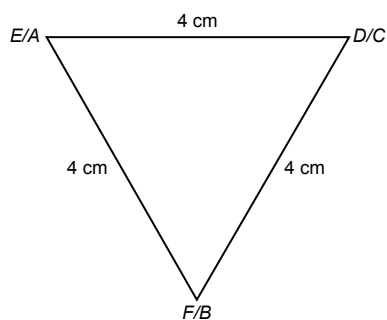
Lukisan unjuran ortogon <i>Drawing of orthogonal projection</i>	Perbandingan antara pepejal dengan unjuran ortogon <i>Comparison between the solid and its orthogonal projection</i>
(i) pada satah mencancang <i>onto the vertical plane</i> 	bagi satah ADE <i>for the plane ADE</i> Semua panjang sisi, saiz sudut dan bentuk ADE adalah sama dengan prisma itu. <i>All the edges, angles and shape ADE are the same as the prism.</i>
(ii) pada satah mengufuk <i>onto the horizontal plane</i> 	bagi satah ABFE dan DCFE <i>for the planes ABFE and DCFE</i> Sama/<i>Same:</i> AB, EF, DC, CF, DE; semua sudut tegak; <i>all the right angles;</i> bentuk/ <i>shape DCFE</i> Berbeza/<i>Different:</i> AE, BF; bentuk/ <i>shape ABFE</i>



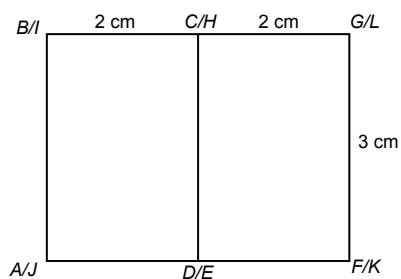
(b)

Lukisan unjuran ortogon <i>Drawing of orthogonal projection</i>	Perbandingan antara pepejal dengan unjuran ortogon <i>Comparison between the solid and its orthogonal projection</i>
(i) pada satah mencancang <i>onto the vertical plane</i> 	bagi satah QRTU <i>for the plane QRTU</i> Sama/Same: QR, UT; semua sudut tegak <i>all the right angles</i> Berbeza/ Different: QU, RT; bentuk/ shape QRTU
(ii) pada satah mengufuk <i>onto the horizontal plane</i> 	bagi satah PQRS dan PSTU <i>for the planes PQRS and PSTU</i> Sama/Same: PQ, RS, PS, QR, UT; semua sudut tegak; <i>all the right angles ;</i> bentuk/ shape PQRS Berbeza/ Different: PU, ST; bentuk/ shape PSTU

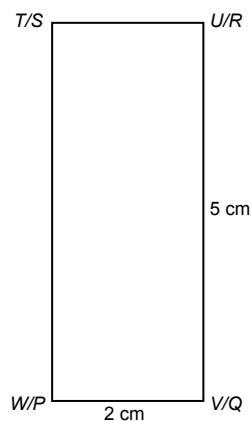
7. (a)



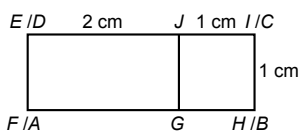
(b)



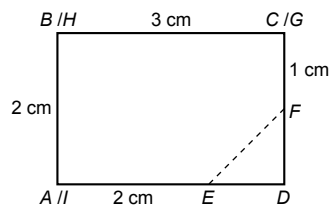
(c)



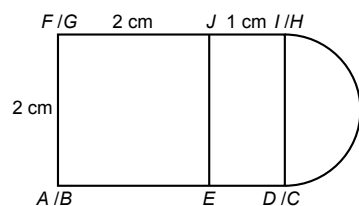
(d)



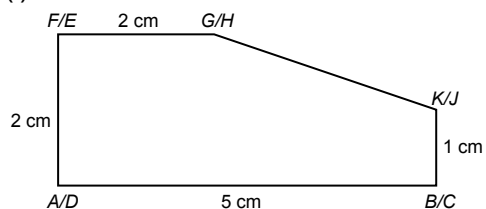
(e)



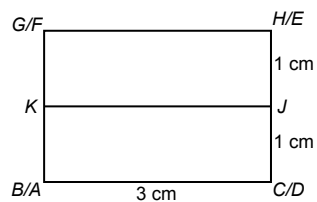
(f)



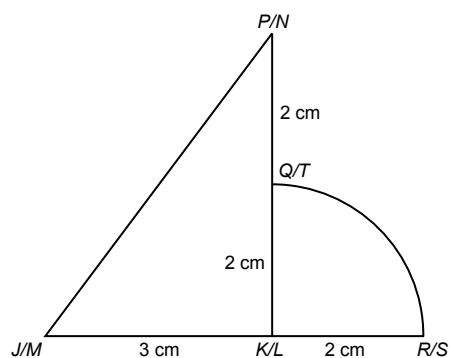
8. (a) (i)



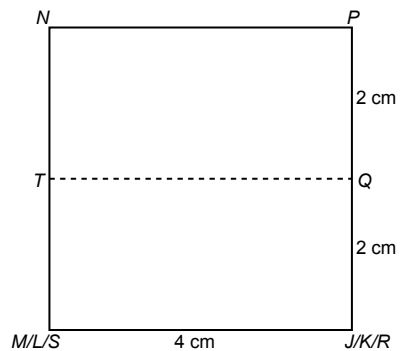
(ii)



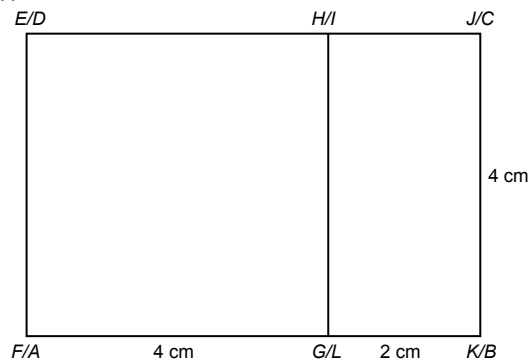
(b) (i)

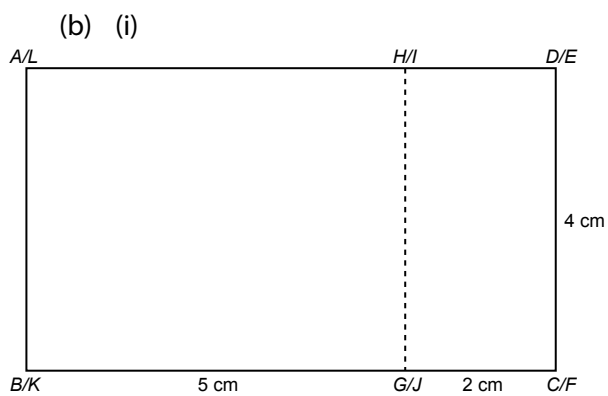
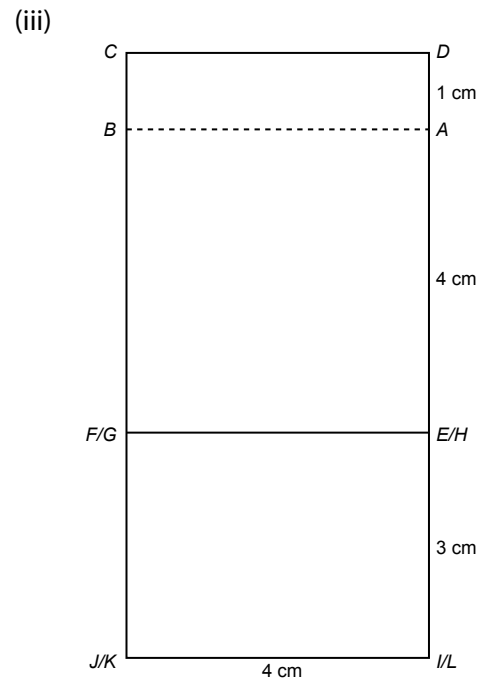
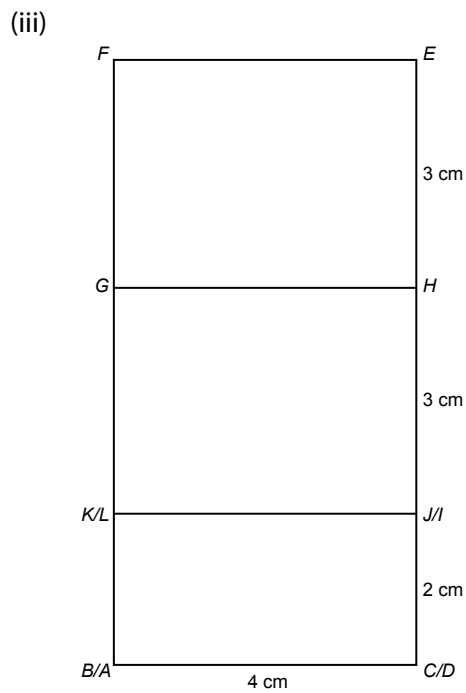
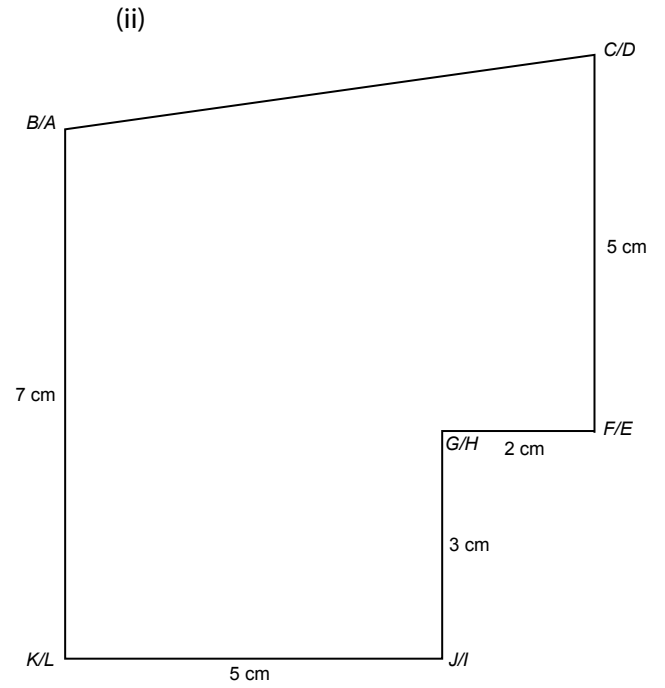
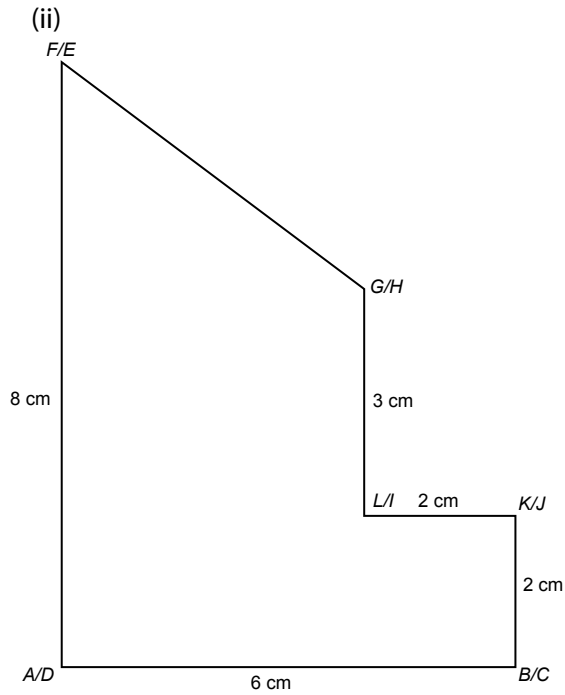


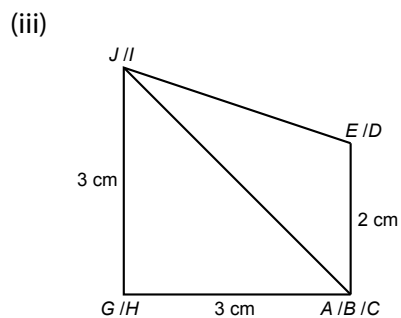
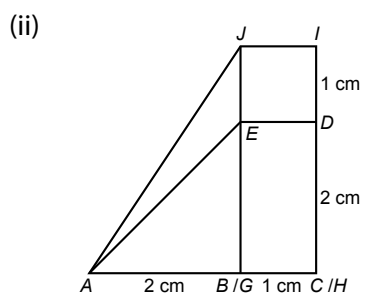
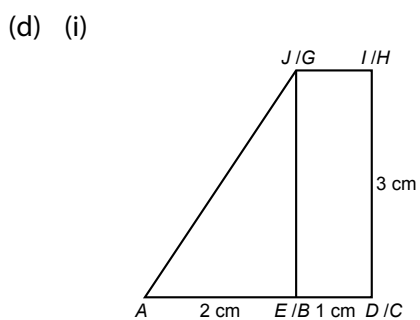
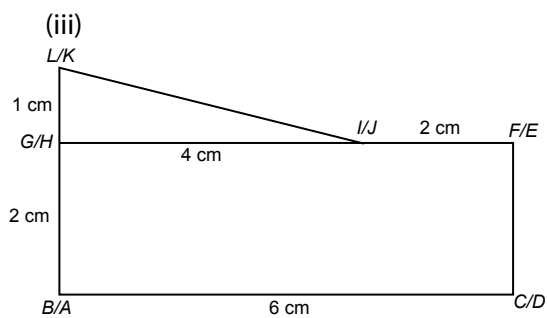
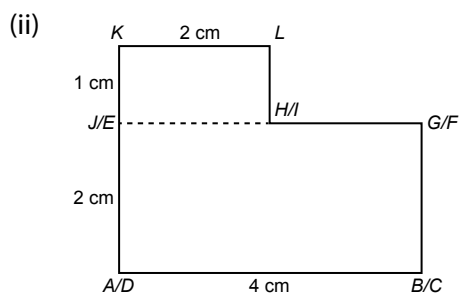
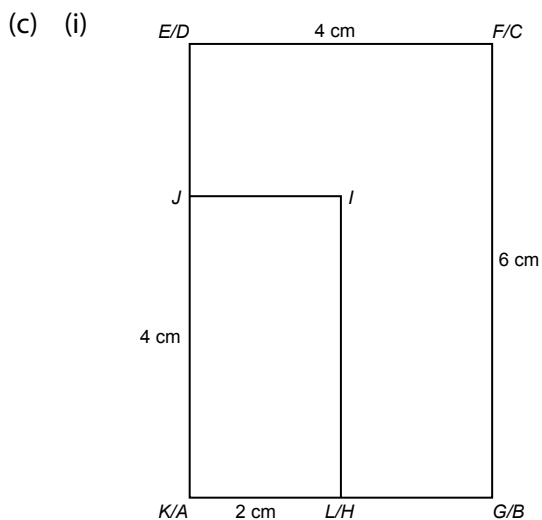
(ii)



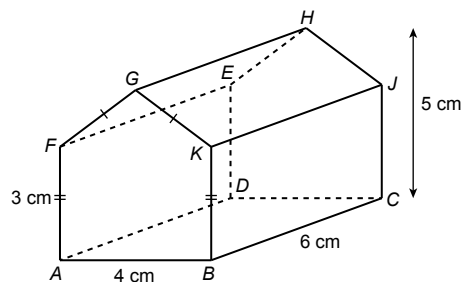
9. (a) (i)



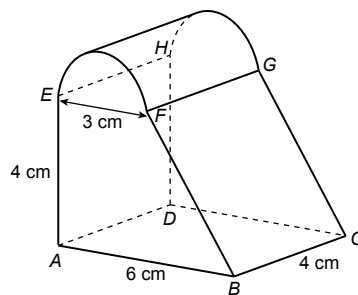




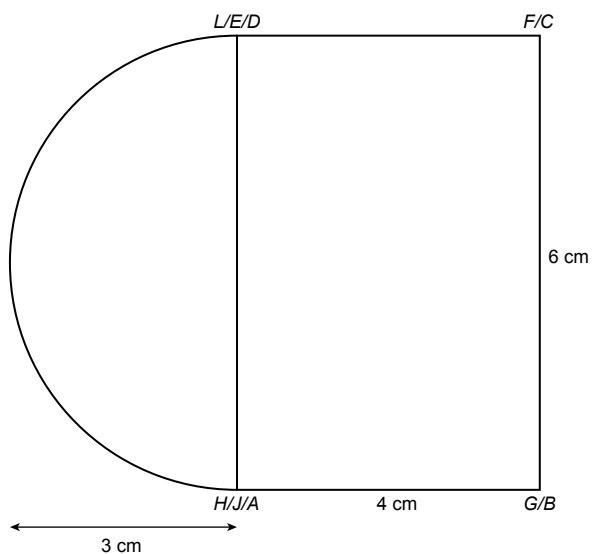
10. (a)

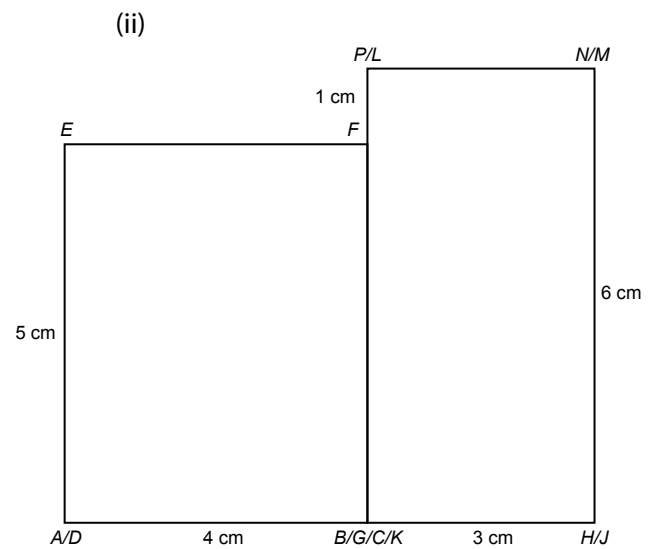
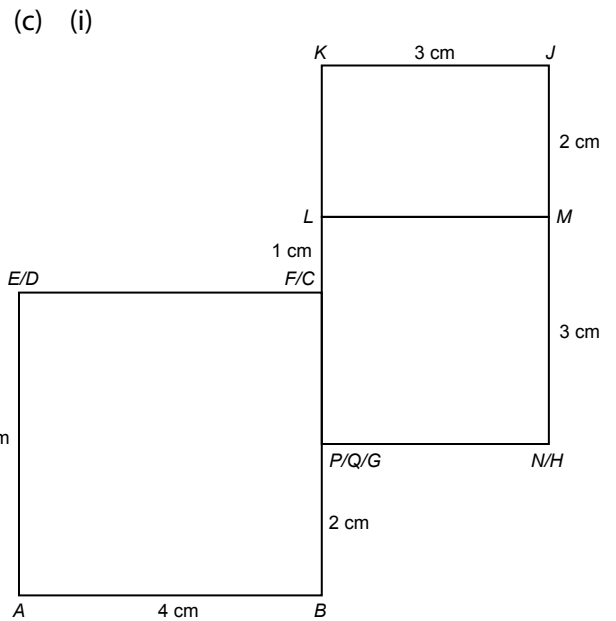
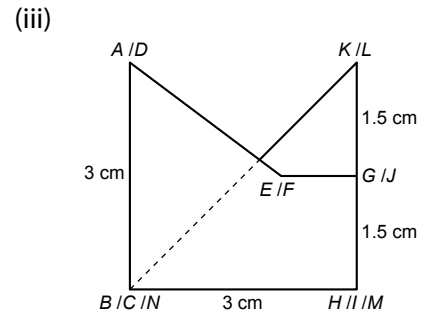
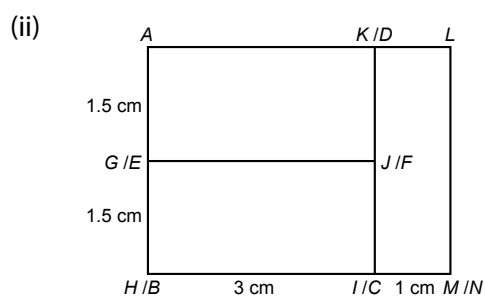
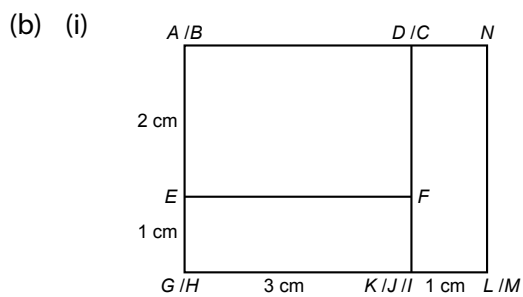
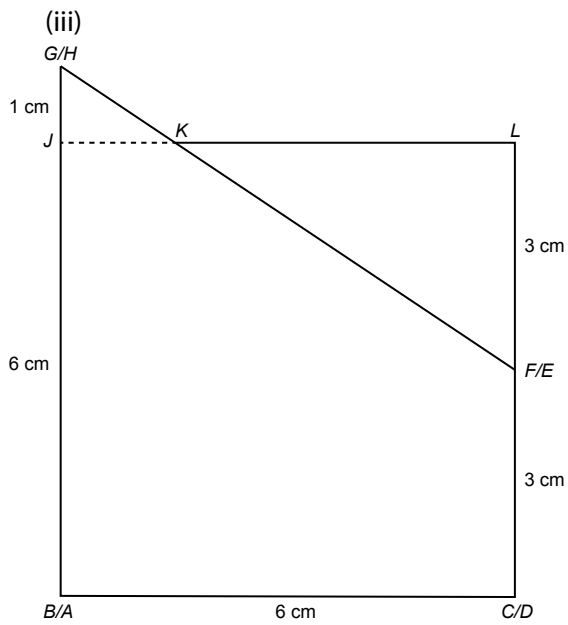
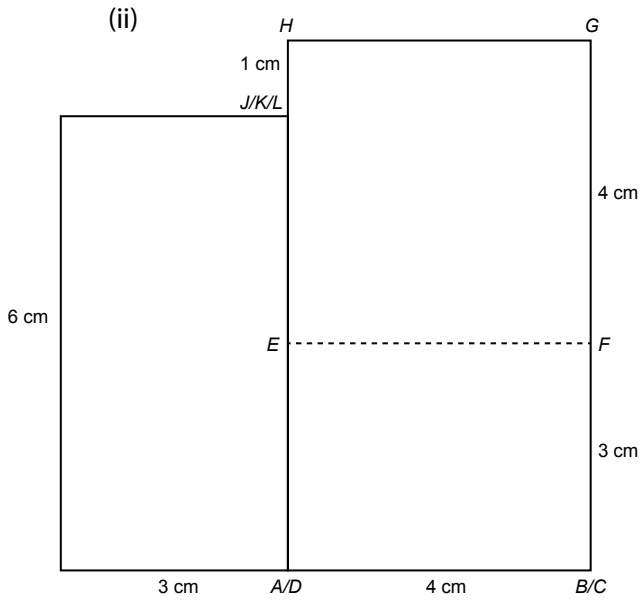


(b)

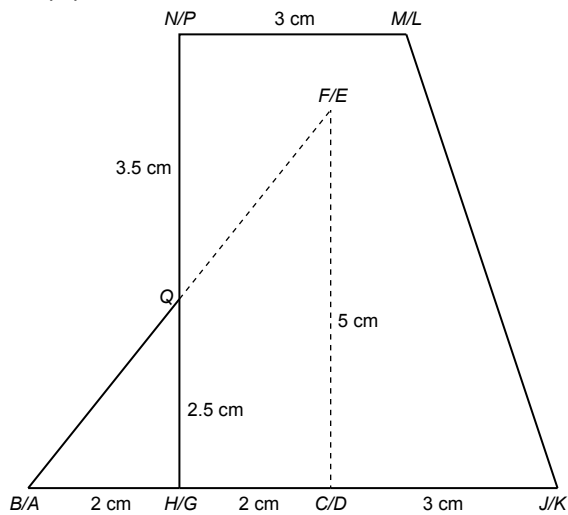


11. (a) (i)

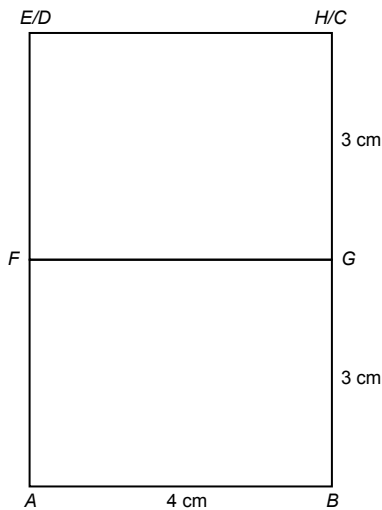




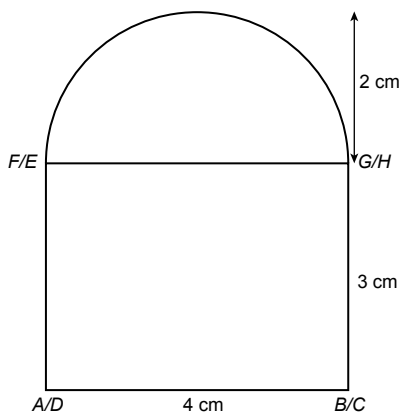
(iii)



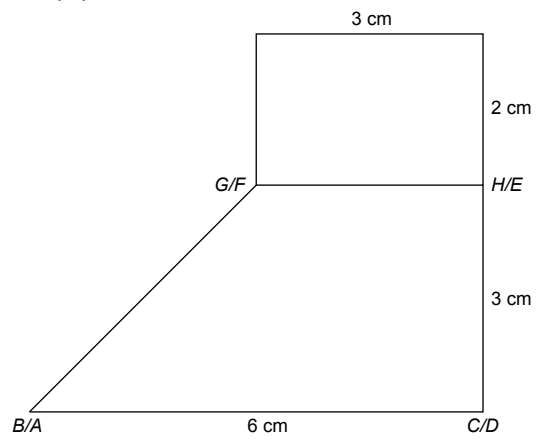
(d) (i)



(ii)



(iii)



Isi padu gabungan pepejal

Volume of composite solid

= Isi padu prisma + Isi padu separuh silinder

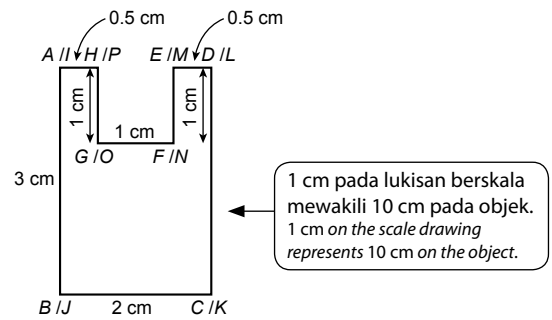
Volume of prism + Volume of half cylinder

$$= \frac{1}{2}(3 + 6) \times 3 \times 4 + \frac{1}{2} \times 3.142 \times 2^2 \times 3$$

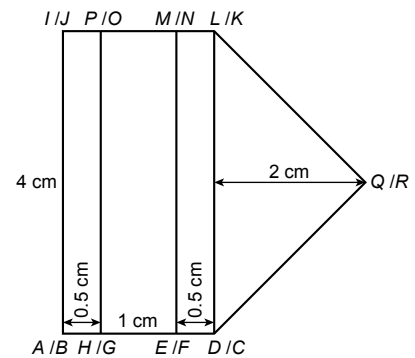
$$= 54 + 18.852$$

$$= 72.852 \text{ cm}^3$$

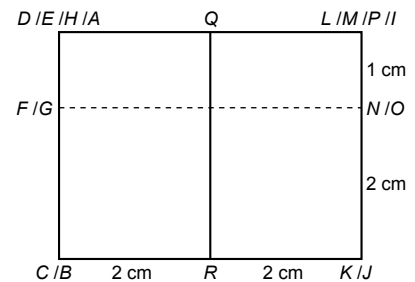
12. (a)



(b) (i)

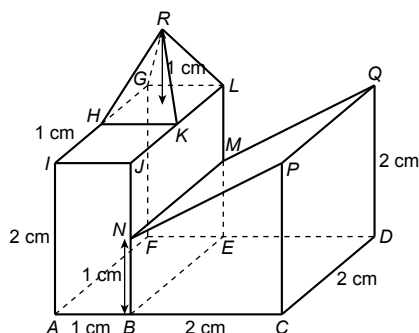


(ii)



13. (a) Silinder / Cylinder
(b) Isi padu / Volume
 $= 3.142 \times 1^2 \times 1$
 $= 3.142 \text{ m}^3$

14. (a)



- (b) Satu piramid, satu kuboid dan satu prisma
A pyramid, a cuboid and a prism

- (c) Luas tapak / Base area
 $= 2 \times 3$
 $= 6 \text{ cm}^2$

- (d) Isi padu / Volume
 $= \text{isi padu kuboid} + \text{isi padu piramid}$
 $+ \text{isi padu prisma}$
volume of cuboid + volume of pyramid + volume of prism
 $= 1 \times 2 \times 2 + \frac{1}{3} \times 1 \times 1 \times 1 + \frac{1}{2} \times (2 + 1) \times 2 \times 2$
 $= 4 + \frac{1}{3} + 6$
 $= 10\frac{1}{3} \text{ cm}^3$

Power PT3

Bahagian A

1. Unjuran ortogon yang betul:
Correct orthogonal projection:



Jawapan / Answer: **B**

2. Isi padu / Volume = 72 cm^3
 Tinggi / Height = 12 cm

Unjuran ortogon yang diberi ialah keratan rentas seragam prisma itu.
The given orthogonal projection is the uniform cross section of the prism.

Isi padu = Luas keratan rentas $\times$ Tinggi
 Volume = Area of cross section $\times$ Height

$$72 = \frac{1}{2} \times 3 \times AB \times 12$$

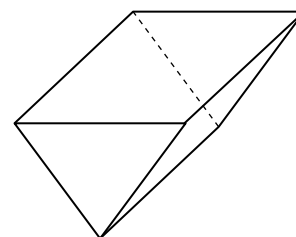
$$72 = 18 \times AB$$

$$AB = \frac{72}{18}$$

$$= 4 \text{ cm}$$

Jawapan / Answer: **B**

3. Bentuk pepejal yang mungkin:
The possible solid:

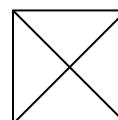


Jawapan / Answer: **C**

4. **D** adalah benar.
D is true.

Jawapan / Answer: **D**

5. Pelan gabungan pepejal itu:
The plan of the composite solid:

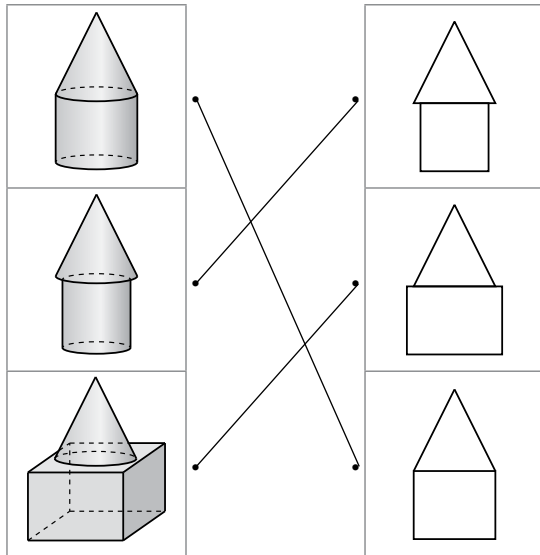


Jawapan / Answer: **D**

Bahagian B

6. (a) ☒
 (b) ☒
 (c) ☒
 (d) ☒

7. (a)

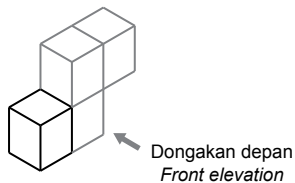


[3 markah / 3 marks]

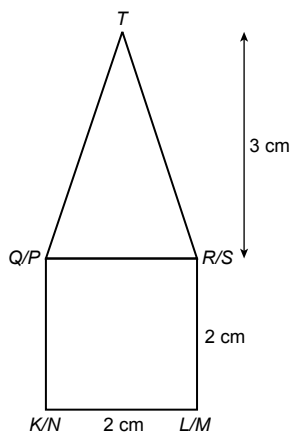
- (b) Pelan ialah unjuran ortogon pada satah mengufuk sebagaimana dilihat dari pandangan (atas/ sisi / depan) suatu objek.
Plan is the orthogonal projection onto the horizontal plane as viewed from the (top/ side / front) of an object.

Bahagian C

8. (a)

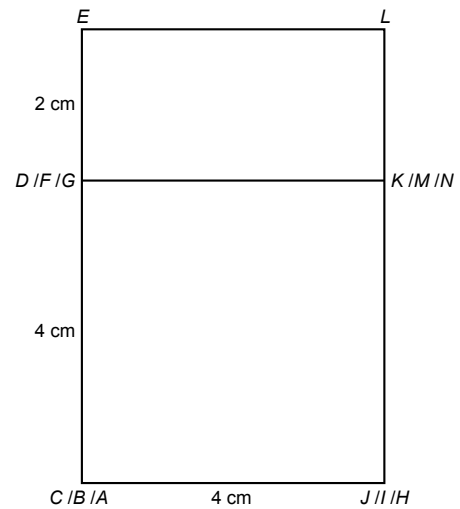


(a) (i)



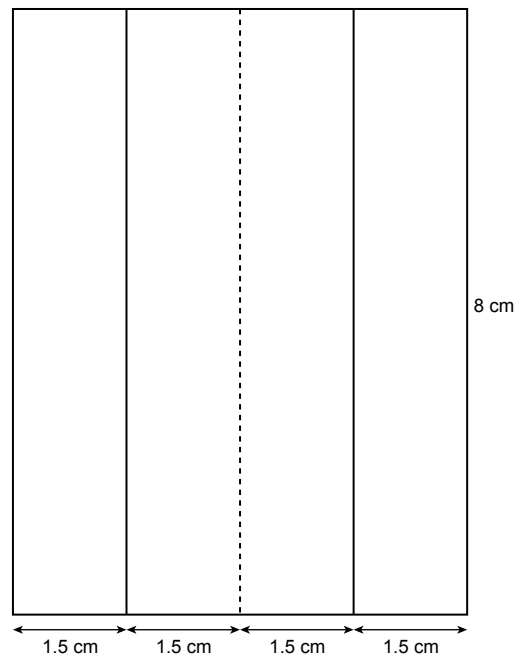
(ii) Tidak/ No

(c)

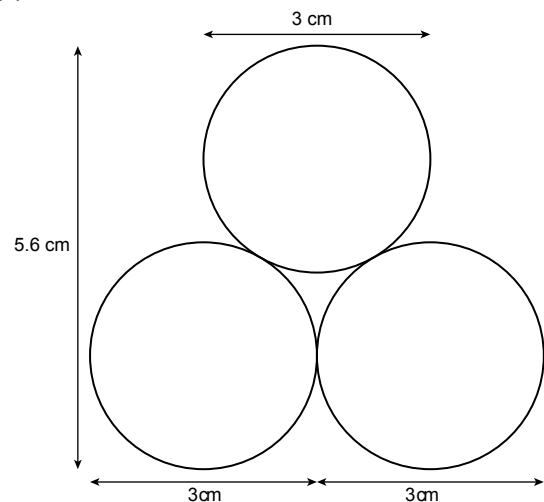


Power KBAT

1. (i)



(ii)



(iii)

