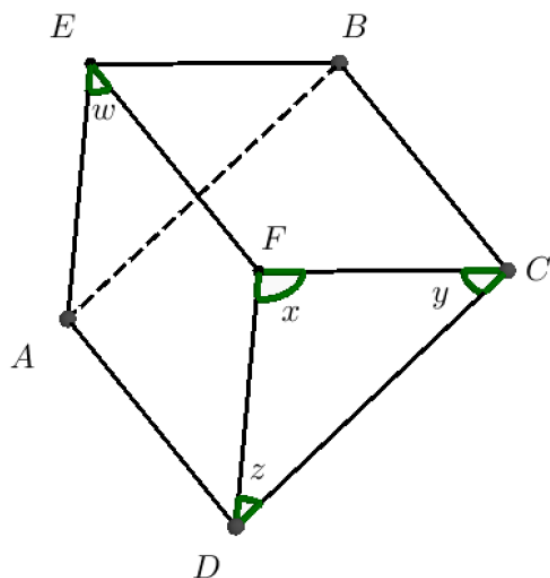


Lines and Planes in 3D Shapes – Section Test

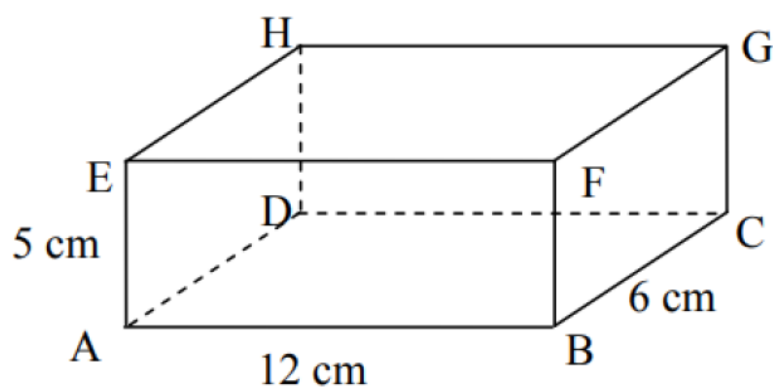
1. In the diagram $EFCB$, $AEFD$, and $ABCD$ are all rectangles



Which of the labelled angles is the angle between the planes $EFCB$ and $AEFD$?

- (a) w (b) y
(c) x (d) z
2. A cone with a base radius of 2cm and a height of 3π cm has the same volume as a pyramid with a square base of side 2 cm. What is the height of the pyramid?

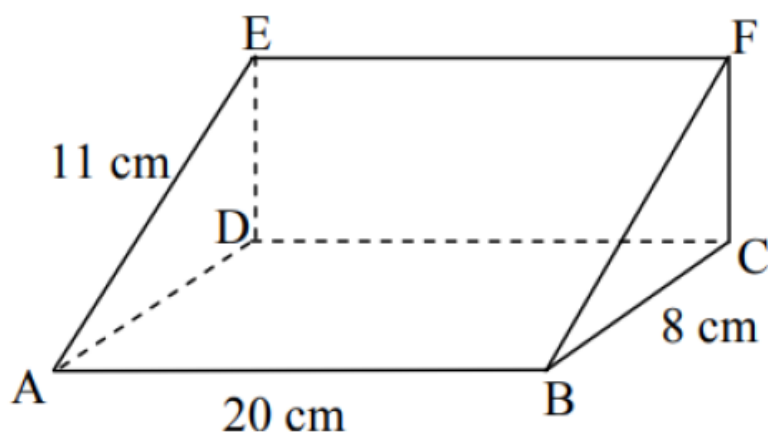
Questions 3 – 5 refer to this cuboid



$AB = 12$ cm, $BC = 6$ cm and $AE = 5$ cm.

3. What is the length of the diagonal AG correct to 3 significant figures?
4. What is the angle between the line GA and the plane $ABCD$, correct to one decimal place?
5. What is the angle between the plane $ABGH$ and the plane $ABCD$, correct to one decimal place?

Questions 6 - 8 refer to this wedge. The base is horizontal; the triangular sides and the rectangle $CDEF$ are all vertical.

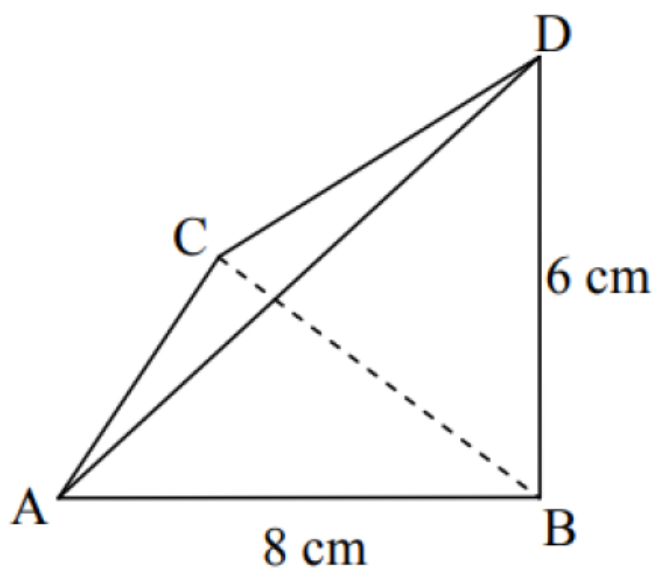


$AB = 20 \text{ cm}$, $BC = 8 \text{ cm}$ and $AE = 11 \text{ cm}$.

6. What is the length of the diagonal AF , correct to one decimal place?
7. What is the angle between the plane $ABEF$ and the plane $ABCD$, correct to one decimal place?
8. What is the angle between the line EB and the plane $ABCD$, correct to one decimal place?

Questions 9 – 10 refer to this pyramid.

ABC is a horizontal, equilateral triangle with $AB = BC = CA = 8 \text{ cm}$, $BD = 6 \text{ cm}$ and D is vertically above B .



9. What is the length of the edge CD ?
10. What is the angle between the line CD and the plane ABC , correct to one decimal place?