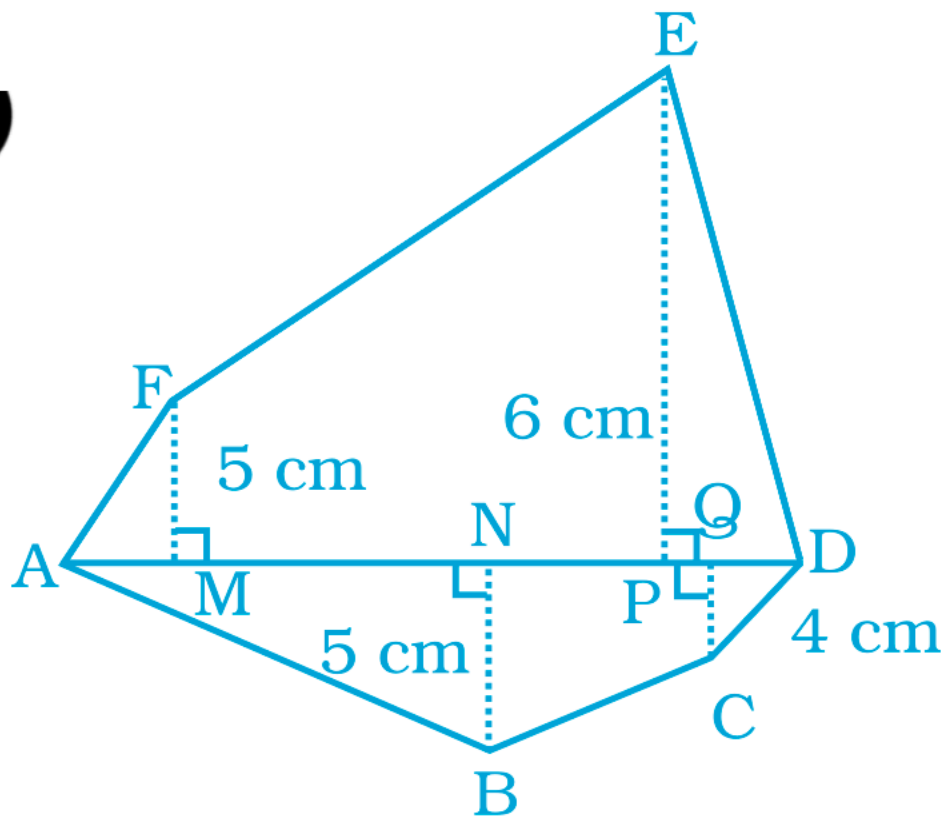
Find the area of polygon ABCDEF, if AD = 18cm, AQ = 14 cm, AP = 12 cm, AN = 8 cm, AM = 4 cm, and FM, EP, QC and BN are perpendiculars to diagonal AD.



**2.** A cube of side 4 cm is cut into 1 cm cubes. What is the ratio of the surface areas of the original cubes and cut-out cubes?

(a) 1 : 2 (b) 1 : 3 (c) 1 : 4 (d) 1 : 6

**3.** A circle of maximum possible size is cut from a square sheet of board. Subsequently, a square of maximum possible size is cut from the resultant circle. What will be the area of the final square?

(a) $\frac{3}{4}$ of original square. (b) $\frac{1}{2}$ of original square.

(c) $\frac{1}{4}$ of original square. (d) $\frac{2}{3}$ of original square.

**4.** What is the area of the largest triangle that can be fitted into a rectangle of length $l$ units and width $w$ units?

(a) $lw/2$ (b) $lw/3$ (c) $lw/6$ (d) $lw/4$

**5.** If the height of a cylinder becomes $\frac{1}{4}$ of the original height and the radius is doubled, then which of the following will be true?

(a) Volume of the cylinder will be doubled.

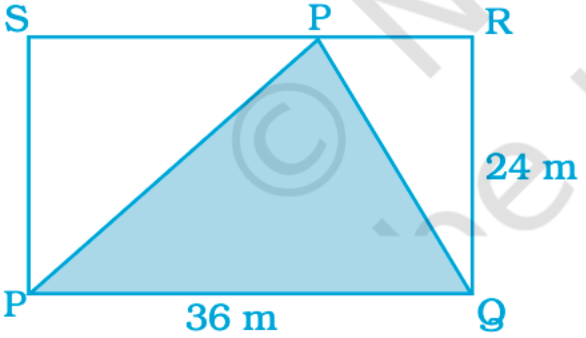
(b) Volume of the cylinder will remain unchanged.

(c) Volume of the cylinder will be halved.

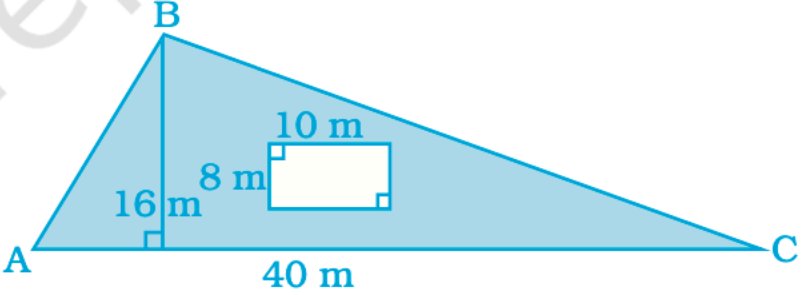
(d) Volume of the cylinder will be $\frac{1}{4}$ of the original volume.

Find the area of the shaded portion in the following figures.

**78.**




**79.**



**Example 7:** Find the height of a cylinder whose radius is 7 cm and the total surface area is 968 $cm^2$.

**Example 9:** A godown is in the form of a cuboid of measures 60 m × 40 m × 30 m. How many cuboidal boxes can be stored in it if the volume of one box is 0.8 $m^3$ ?