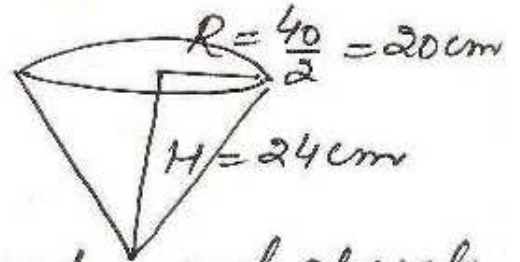
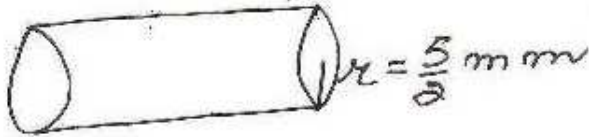


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⑤



volume of water flowing out = vol. of water collected

$$\pi r^2 h = \frac{1}{3} \pi R^2 H$$

$$\frac{5 \times 5}{20 \times 20} h = \frac{1}{3} \times 20^4 \times 24^8$$

$$\Rightarrow h = 128 \times 2 \times 2 \times 100$$

$$= 51200 \text{ cm}$$

$$= 512 \text{ m}$$

$$\text{Speed} = 10 \text{ m/min}$$

h is not the length of pipe

$$\text{time} = \frac{\text{dis}}{\text{Speed}}$$

$$= \frac{512}{10}$$

$$= 51.2 \text{ min}$$

$$= 51 \text{ min } \frac{2}{10} \times 60 \text{ s}$$

$$= 51 \text{ min } 12 \text{ second}$$

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