

Volume of Pyramids and Cones

formula: $V = \frac{1}{3} Bh$

height of the pyramid

area of the base

cone: $V = \frac{1}{3} Bh = V = \frac{1}{3} \pi r^2 h$

square pyramid: $V = \frac{1}{3} Bh = V = \frac{1}{3} s^2 h$

rectangular pyramid: $V = \frac{1}{3} Bh = V = \frac{1}{3} lwh$

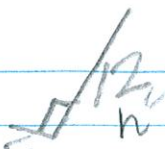
triangular pyramid: $V = \frac{1}{3} Bh = V = \frac{1}{3} \left(\frac{bh}{2}\right) h$

pg. 520 your turn now

① square pyramid

$$V = \frac{1}{3} Bh = V = \frac{1}{3} s^2 h = \frac{1}{3} (8^2) 9 = 192 \text{ in}^3$$

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② triangular pyramid 

$$V = \frac{1}{3}Bh = \frac{1}{3}\left(\frac{bh}{2}\right)h = \frac{1}{3}\left(\frac{5 \cdot 12}{2}\right)10$$
$$= 100 \text{ ft}^3$$

③ rectangular pyramid

$$V = \frac{1}{3}Bh = V = \frac{1}{3}lwh = \frac{1}{3}20 \cdot 8 \cdot 15$$
$$= 800 \text{ m}^3$$

$$⑤ V = \frac{1}{3}\pi r^2 h = \frac{1}{3}\pi(24^2)18 =$$
$$= 10,857.3 \text{ m}^3$$

$$⑥ V = \frac{1}{3}\pi r^2 h = \frac{1}{3}\pi(4^2)16 =$$
$$268.1 \text{ in}^3$$

$$⑦ V = \frac{1}{3}\pi r^2 h = \frac{1}{3}\pi(15^2)28 =$$
$$6597.3 \text{ ft}^3$$