

Name: _____

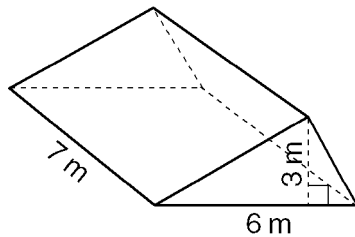
CC Geometry Honors Homework

Volume of Prisms and Cylinders

- 1) What is the volume of a cube with a side measuring 8 centimeters?

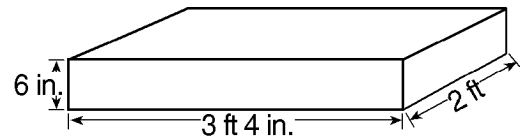
A) 512 cm^3 C) 200.96 cm^3
 B) 312 cm^3 D) 64 cm^3

- 2) What is the volume of the triangular prism below?



A) 126 m^3 C) 63 m^3
 B) 189 m^3 D) 42 m^3

- 3) A farmer feeds his animals twice a day from a rectangular trough, filled to the top. The trough is 3 ft 4 in. long, 2 ft wide, and 6 in. high.



Assuming the animals completely empty the trough of food, how many cubic inches of food do his animals eat each day?

A) $11,520 \text{ in.}^3$ C) $10,368 \text{ in.}^3$
 B) $2,880 \text{ in.}^3$ D) $5,760 \text{ in.}^3$

- 4) Find, in terms of π , the volume of a right circular cylinder whose height is 10 inches and whose radius is 3 inches.

- 5) A right circular cylinder has a volume of 960π inches³ and an altitude of 15 inches. What is the length of the radius of the cylinder? [*Show all work.*]

- 6) A cylindrical steel rod has a diameter of 8 inches and a length of 4 feet. If one cubic inch of this steel weighs 32 pounds, what is the weight of this rod? [*Round your answer to the nearest tenth of a pound.*]

1) A 2) C 3) D

4) $90\pi \text{ in.}^3$

5) 8 in.

WORK SHOWN: $V = \pi r^2 h$, $960\pi = \pi(r^2)(15)$, $64 = r^2$, $r = 8$

6) 77,208.8 pounds