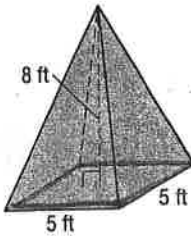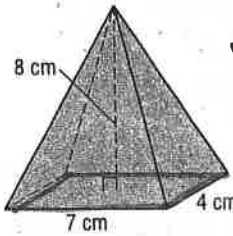**13-2** **Skills Practice**

Volumes of Pyramids and Cones

Find the volume of each pyramid or cone. Round to the nearest tenth if necessary.

1.
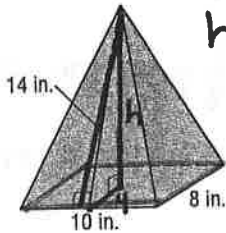
$V = \frac{1}{3}(25)(8) = 66.7 ft^3$
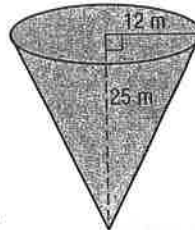
2.

$V = \frac{1}{3}(28)(8)$

$V = 74.7 cm^3$

3.

$h^2 + 4^2 = 14^2$

$h = 13.416$

$V = \frac{1}{3}(80)(13.416)$

$V = 357.76 in^3$
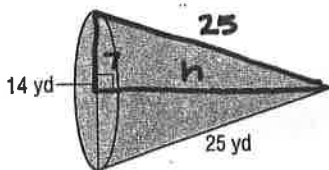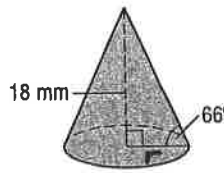
4.

$V = \frac{1}{3}\pi(12^2)(25)$

$V = 3769.9 m^3$

5.

$h = \sqrt{25^2 - 7^2} = 24$

$V = \frac{1}{3}\pi(7^2)(24) = 1231.5 yd^3$

6.

$V = \frac{1}{3}\pi(8.014^2)(18)$

$V = 1210.6 mm^3$
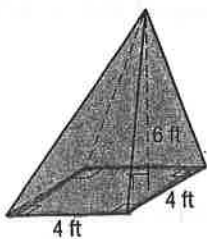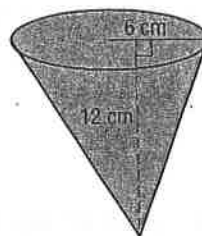
1206.4

$\frac{\tan 66}{1} = \frac{18}{r}$

$r = 8.014$

Find the volume of each oblique pyramid or cone. Round to the nearest tenth if necessary.

7.

$V = \frac{1}{3}(16)(6) = 32 ft^3$

8.

$V = \frac{1}{3}\pi(6^2)(12)$

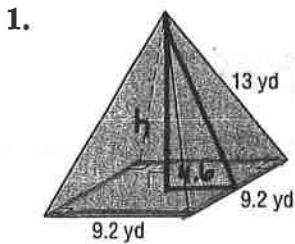$V = 452.4 cm^3$

13-2 Practice

Volumes of Pyramids and Cones

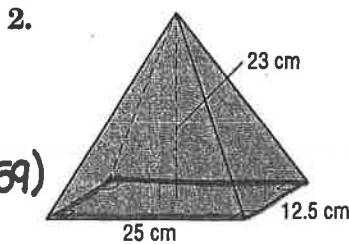Find the volume of each pyramid or cone. Round to the nearest tenth if necessary.

1.

13 yd
9.2 yd
9.2 yd

$h=\sqrt{13^2-4.6^2}$
$h=12.159$
$V=\frac{1}{3}(84.64)(12.159)$
$V=343.0\,yd^3$

2.

23 cm
12.5 cm
25 cm

$V=\frac{1}{3}(312.5)(23)$
$V=2395.8\,cm^3$

3.

9 ft
19 ft
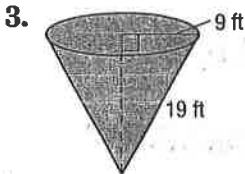
$V=\frac{1}{3}\pi(9^2)(\text{ }) (16.733)$
$V=1419.3\,ft^3$
1416.5

4.

12 mm
52°
r
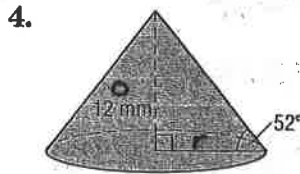
$V=\frac{1}{3}\pi(9.375^2)(12)$
$V=1104.5\,mm^3$
1110.4

$\frac{\tan52}{1}=\frac{12}{r}$ $r=9.375$

5.

11 in.
6 in.
6 in.

$V=\frac{1}{3}(36)(11)=132\,in^3$

6.

11 ft
37 ft
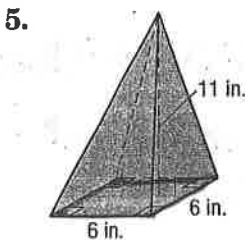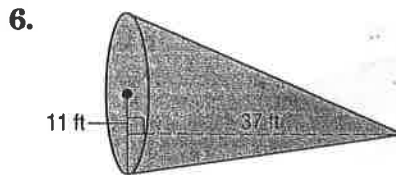
$V=\frac{1}{3}\pi(11^2)(37)$
$V=4688.3\,ft^3$

7. **CONSTRUCTION** Mr. Ganty built a conical storage shed. The base of the shed is 4 meters in diameter, and the height of the shed is 3.8 meters. What is the volume of the shed?

8. **HISTORY** The start of the pyramid age began with King Zoser's pyramid, erected in the 27th century B.C. In its original state, it stood 62 meters high with a rectangular base that measured 140 meters by 118 meters. Find the volume of the original pyramid.

Glencoe Geometry