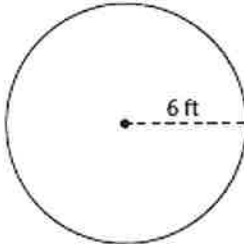


Section 1.1 – Practice Problems

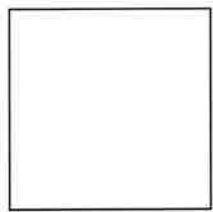
Find the area of each figure.

1) $A = \pi r^2$
 $= \pi (6)^2$



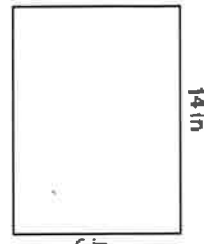
Area = 113.1 ft²

2) $A = l^2$
 $= (12)^2$



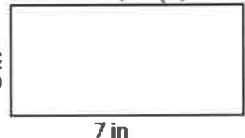
Area = 144 yd²

3) $A = bh$
 $= (6)(14)$



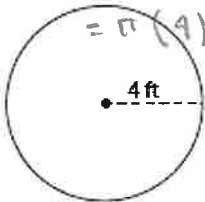
Area = 84 in²

4) $A = bh$
 $= (7)(3)$



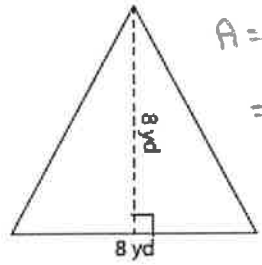
Area = 21 in²

5) $A = \pi r^2$
 $= \pi (4)^2$



Area = 50.3 ft²

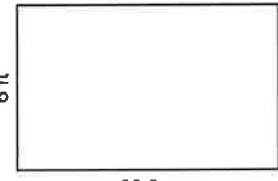
6) $A = \frac{bh}{2}$
 $= \frac{8(8)}{2}$



Area = 32 yd²

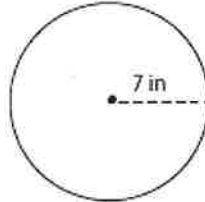
Find the area of each figure.

7) $A = bh$
 $= (11)(6)$



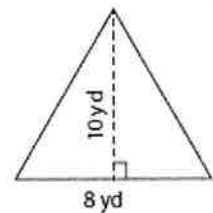
Area = 66 ft²

8) $A = \pi r^2$
 $= \pi (7)^2$



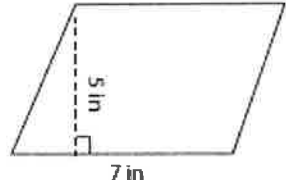
Area = 153.9 in²

9) $A = \frac{bh}{2}$
 $= \frac{8(10)}{2}$



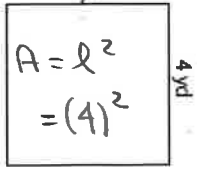
Area = 40 yd²

10) $A = bh$
 $= 7(5)$
 $= 35 \text{ in}^2$



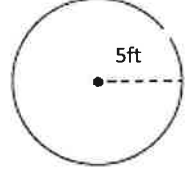
Area = 35 in²

11) $A = l^2$
 $= (4)^2$



Area = 16 yd²

12) $A = \pi r^2$
 $= \pi (5)^2$



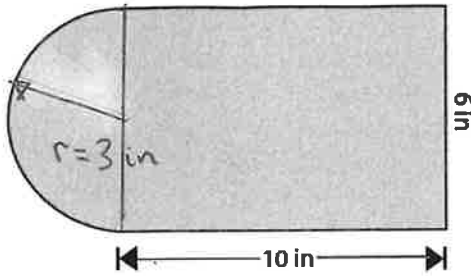
Area = 78.5 ft²

Find the area of each figure. Round the answer to 2 decimal places if necessary.

13)

$$A = \frac{\pi r^2}{2}$$

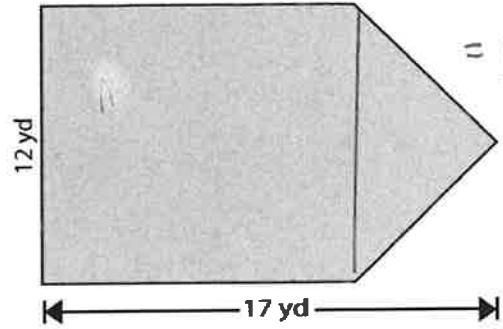
$$= \frac{\pi (3)^2}{2}$$



$$A = 10(6)$$

$$\text{Area} = \underline{74.1 \text{ in}^2}$$

14)



$$A = (12)^2$$

$$A = \frac{bh}{2}$$

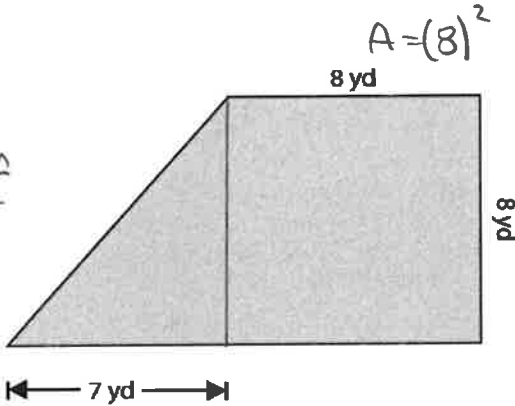
$$= \frac{12(5)}{2}$$

$$\text{Area} = \underline{174 \text{ yd}^2}$$

15)

$$A = \frac{bh}{2}$$

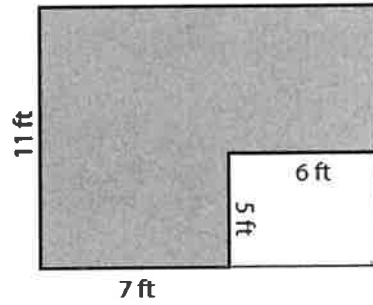
$$= \frac{7(8)}{2}$$



$$A = (8)^2$$

$$\text{Area} = \underline{92 \text{ yd}^2}$$

16)



$$A = 11(13)$$

subtract

$$A = 5(6)$$

$$\text{Area} = \underline{113 \text{ ft}^2}$$

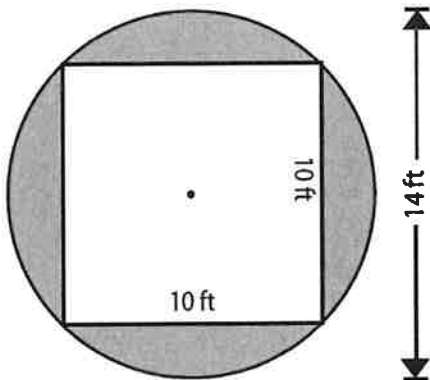
17)

$$A = \pi r^2$$

$$= \pi (7)^2$$

subtract

$$A = (10)^2$$



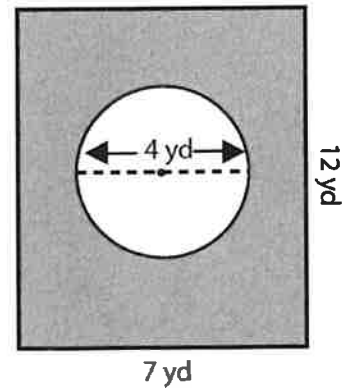
$$\text{Area} = \underline{53.9 \text{ ft}^2}$$

18)

$$A = (12)(7)$$

subtract

$$A = \pi (2)^2$$

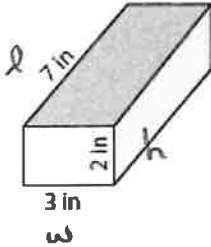


$$\text{Area} = \underline{71.4 \text{ yd}^2}$$

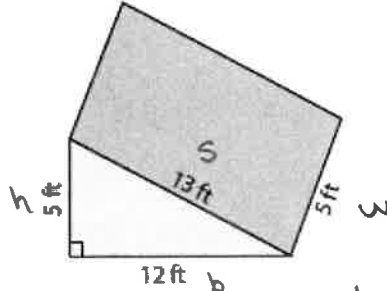
Section 1.2 – Practice Problems

Find the Exact Surface Area of the following shapes. Round to 1 decimal place if necessary.

1) $SA = 2lw + 2lh + 2wh$ 2)
 $= 2(7)3 + 2(7)2 + 2(3)2$

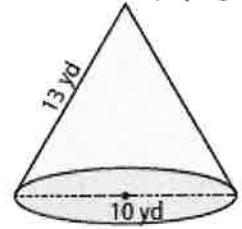


Surface Area = 82 in²



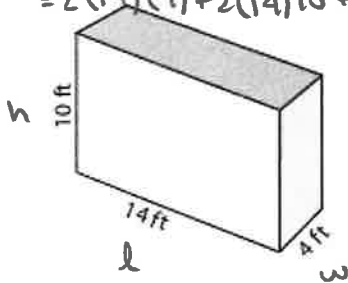
$SA = bh + bw + wh + ws$
 $= (12)5 + 12(5) + 5(5) + 5(13)$
 Surface Area = 210 ft²

3) $SA = \pi r^2 + \pi r s$
 $= \pi(5)^2 + \pi(5)13$



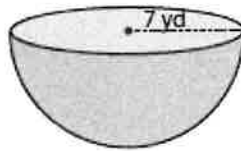
Surface Area = 282.7 yd²

4) $SA = 2lw + 2lh + 2wh$ 5)
 $= 2(14)(4) + 2(14)10 + 2(4)10$



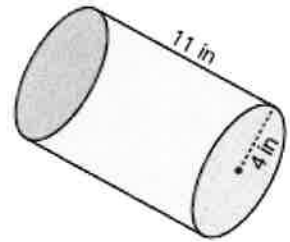
Surface Area = 472 ft²

$SA = 3\pi r^2$
 $= 3\pi(7)^2$



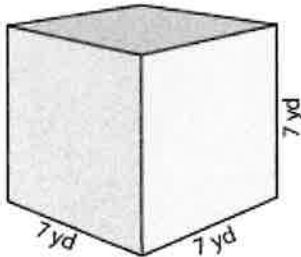
Surface Area = 461.8 yd²

6) $SA = 2\pi r^2 + 2\pi r h$
 $= 2\pi(4)^2 + 2\pi(4)11$



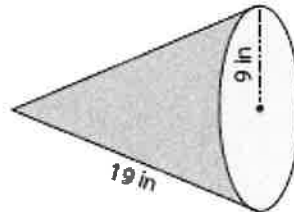
Surface Area = 377. in²

7) $SA = 6a^2$
 $= 6(7)^2$



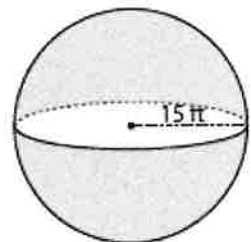
Surface Area = 294.0 yd²

8) $SA = \pi r^2 + \pi r s$
 $= \pi(9)^2 + \pi(9)19$



Surface Area = 791.7 in²

9) $SA = 4\pi r^2$
 $= 4\pi(15)^2$



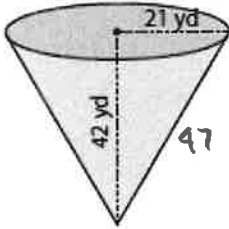
Surface Area = 2827.4 ft²

Find the Exact Surface Area of the following shapes. Round to 1 decimal place if necessary.

$$SA = 2\pi r^2 + 2\pi rh$$

$$= 2\pi(12)^2 + 2\pi(12)27$$

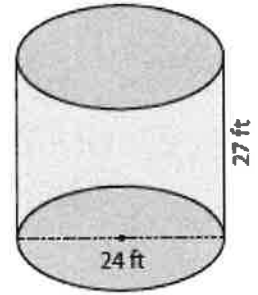
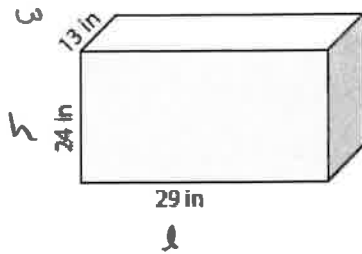
10) $SA = \pi r^2 + \pi r s$
 $= \pi(21)^2 + \pi(21)47$



$$21^2 + 42^2 = s^2$$

$$s = 47$$

11) $SA = 2lw + 2lh + 2wh$
 $= 2(29)13 + 2(29)24 + 2(13)24$

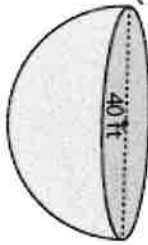


Surface Area = 4486.2 yd²

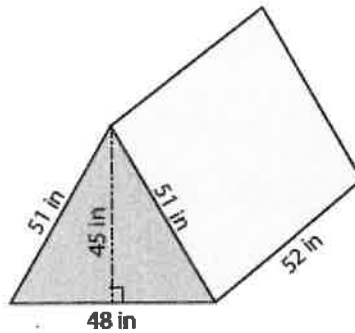
Surface Area = 2770 in²

Surface Area = 2940.5 ft²

13) $SA = 3\pi r^2$
 $= 3\pi(20)^2$



14)



$$SA = 48(45) + 51(52) + 51(52) + 48(52)$$

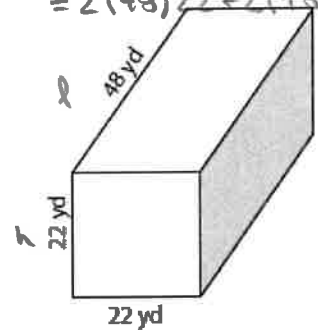
Surface Area = 3769.9 ft²

Surface Area = 9960 in²

15)

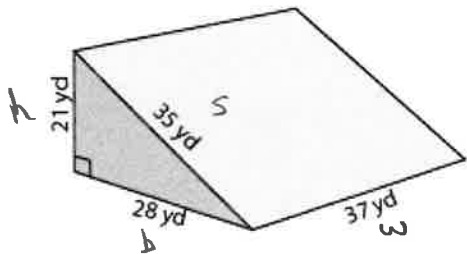
$$SA = 2lw + 2lh + 2wh$$

$$= 2(48)22 + 2(48)22 + 2(22)22$$



Surface Area = 5192 yd²

16)



$$SA = bh + bw + wh + ws$$

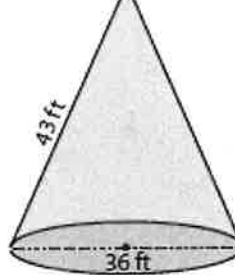
$$= 28(21) + 28(37) + 37(21) + 37(35)$$

Surface Area = 3696 yd²

17)

$$SA = \pi r^2 + \pi r s$$

$$= \pi(18)^2 + \pi(18)43$$

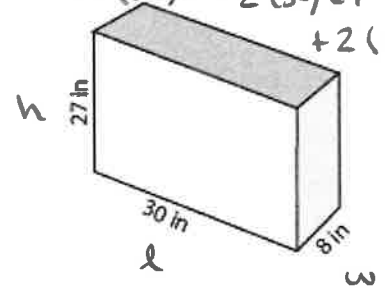


Surface Area = 3499.5 ft²

18)

$$SA = 2lw + 2lh + 2wh$$

$$= 2(30)8 + 2(30)27 + 2(8)27$$

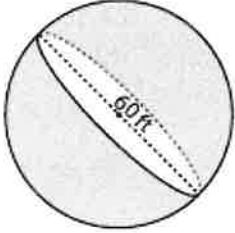


Surface Area = 2532 in²

Section 1.3 – Practice Problems

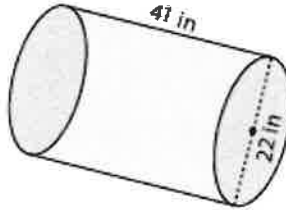
Find the volume of each shape. Round the answer to nearest tenth. (use $\pi = 3.14$)

1) $V = \frac{4}{3}\pi r^3$
 $= \frac{4}{3}\pi (30)^3$



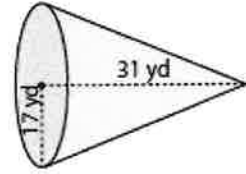
Volume = 113097 ft³

2) $V = \pi r^2 h$
 $= \pi (11)^2 41$



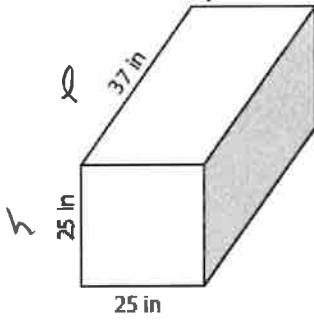
Volume = 15585.4 in³

3) $V = \frac{1}{3}\pi r^2 h$
 $= \frac{1}{3}\pi (17)^2 31$



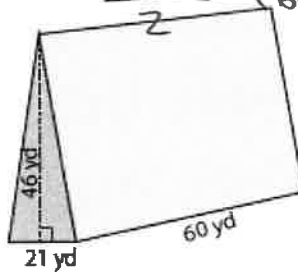
Volume = 9381.8 yd³

4) $V = lwh$
 $= 37(25)25$



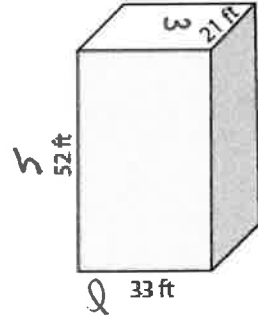
Volume = 23125 in³

5) $V = \frac{bh}{2} l$
 $= \frac{21(46)}{2} (60)$



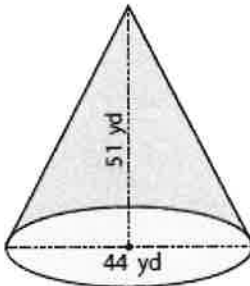
Volume = 28980 yd³

6) $V = lwh$
 $= 33(21)52$



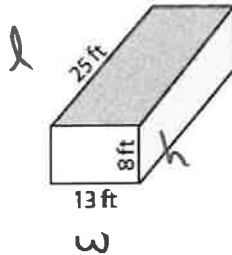
Volume = 36036 ft³

7) $V = \frac{1}{3}\pi r^2 h$
 $= \frac{1}{3}\pi (22)^2 51$



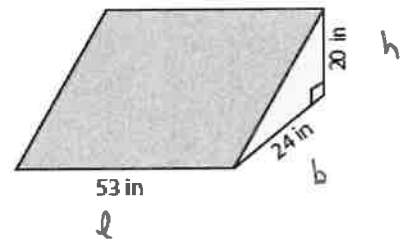
Volume = 25849 yd³

8) $V = lwh$
 $= (25)(13)(8)$



Volume = 2600 ft³

9) $V = \frac{bh}{2} l$
 $= \frac{24(20)}{2} (53)$



Volume = 12720 in³