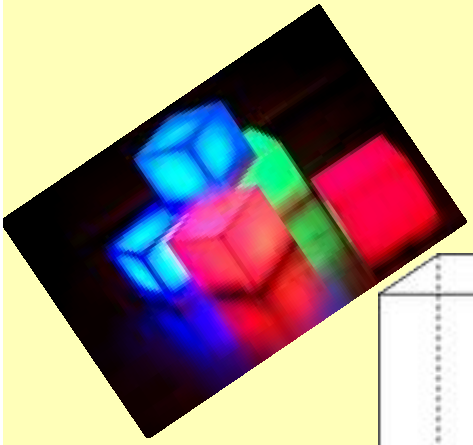
Intro to High School Math

Section 1.3:
Surface Area of Objects Made from Right Rectangular Prisms



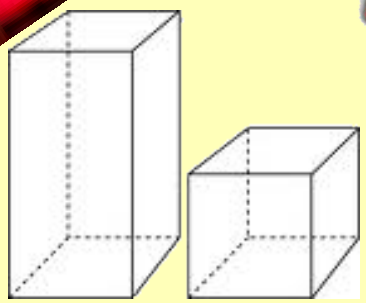
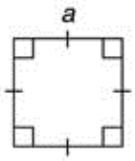
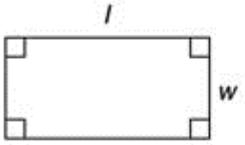
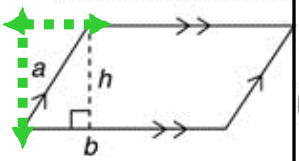
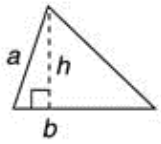
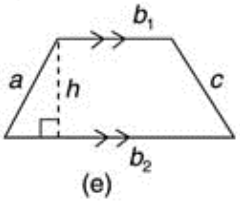
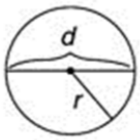
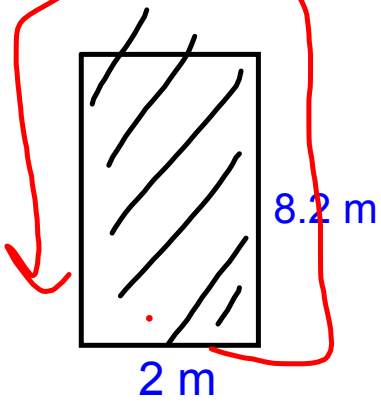
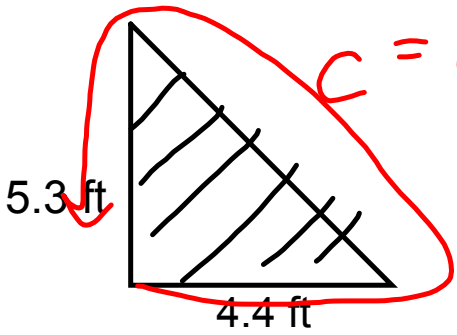


Figure	Name	Perimeter/ Circumference	Area
 (a)	square	P= a+a+a+a or P= 4a	A= $(Side)^2$
 (b)	rectangle	P= l+w+l+w P= 2l+2w	A= Length x Width
 (c)	parallelogram	P= a+b+a+b P= 2a+2b	A= Base x Height
 (d)	triangle	P= a+b+c	A= $\frac{\text{Base x Height}}{2}$
 (e)	trapezoid	P= a+ b_1+c+b_2	A= $\frac{(b_1+b_2)}{2}$ x Height
 (g)	circle	C=πd or C= 2π r	A =π r^2

Find the area and perimeter of both





$c = 6.9\text{ft}$

$\text{Area} = b \times h$

$(2\text{m}) \times (8.2\text{m})$

$A = 16.4\text{m}^2$

$\text{Area} = \frac{b \times h}{2}$

$\frac{4.4\text{ft} \times 5.3\text{ft}}{2}$

$\text{Area} = 11.7\text{ft}^2$

$\text{Perimeter} = 2\text{m} + 8.2\text{m} + 2\text{m} + 8.2\text{m}$

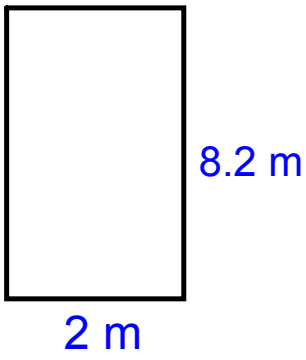
$P = 20.4\text{m}$

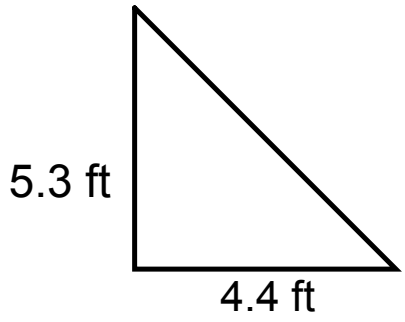
$a^2 + b^2 = c^2$

$4.4^2 + 5.3^2 = \sqrt{47.45}$

6.9ft

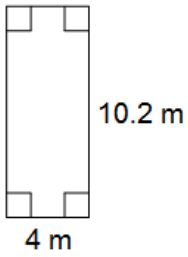
$P = 16.6\text{ft}$


8.2 m
2 m


5.3 ft
4.4 ft

Find the area of each.

1)



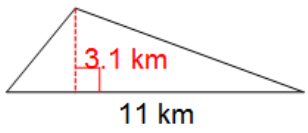
Area = b x h

= 4m x 10.2m

A = 40.8 m^2

Find the area of each.

2)



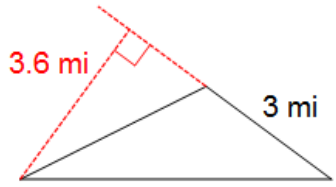
Area = $\frac{b \times h}{2}$

$= \frac{11 \times 3.1}{2}$

$A = 17.1 km^2$

Find the area of each.

3)



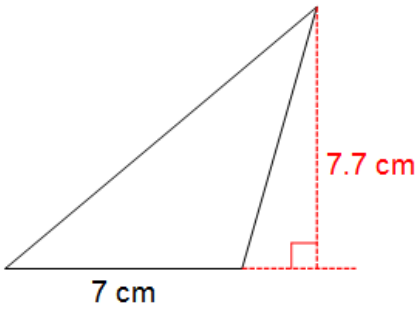
$$\text{Area} = \frac{b \times h}{2}$$

$$\frac{(3\text{mi}) \times (3.6\text{mi})}{2}$$

$$A = 5.4\text{mi}^2$$

Find the area of each.

4)



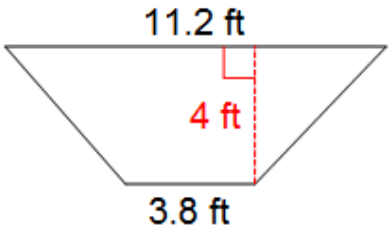
$$\text{Area} = \frac{b \times h}{2}$$

$$\frac{7\text{cm} \times 7.7\text{cm}}{2}$$

$$\text{Area} = 27\text{cm}^2$$

Find the area of each.

6)



$$A = \left(\frac{b_1 + b_2}{2}\right) h$$

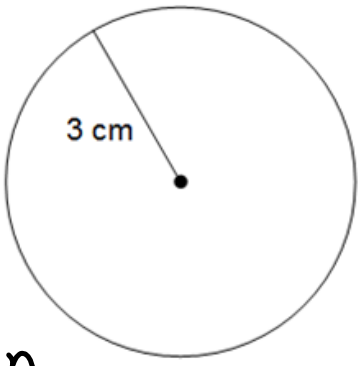
$$A = \left(\frac{3.8 + 11.2}{2}\right)(4)$$

$$A = \left(\frac{15}{2}\right) 4$$

$$A = \frac{60}{2}$$

$$A = 30 \text{ ft}^2$$

8)



Find area & Circumference

$\text{Area} = \pi r^2$

$(3.14)(3\text{cm})^2 = 28.3\text{cm}^2$

$C = 2\pi r$

$2 \times 3.14 \times 3 = 18.8\text{ cm}$