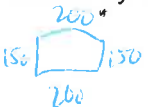


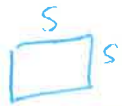


<p>1. Convert 100 inches into feet and inches</p> <p>8ft 4in</p>	<p>Convert 320 inches into feet and inches</p> <p>26ft 8in</p>	<p>Convert 205 inches into feet and inches</p> <p>17ft 1in</p>
<p>2. I am making a flower bed for my front lawn and need to by the material in 8 ft lengths, how many boards would I need to purchase for a flower bed that is 200 inches by 150 inches?</p>  <p>$\frac{700 \text{ inches}}{96} = 7.29$</p> <p>8 boards</p>	<p>I am making a flower bed for my front lawn and need to by the material in 6 ft lengths, how many boards would I need to purchase for a flower bed that is 500 inches by 250 inches?</p>  <p>$\frac{1500 \text{ in}}{72} = 20.83$</p> <p>21 boards</p>	<p>I am making a flower bed for my front lawn and need to by the material in 11 ft lengths, how many boards would I need to purchase for a flower bed that is 300 inches by 100 inches?</p>  <p>$\frac{800 \text{ in}}{132} = 6.06$</p> <p>7 boards</p>
<p>3. Convert 123456 ft into miles</p> <p>23.38 mi</p>	<p>Convert 135490 cm into meters</p> <p>$\frac{135490}{100} = 1354.9 \text{ m}$</p>	<p>Convert 25 yds into inches</p> <p>$25 \times 36 = 900 \text{ in}$</p>
<p>4. A circular carpet has an area of 113.10 m^2. What is the radius in cm?</p> <p>$A = \pi r^2$</p> <p>$113.10 = \pi r^2$</p> <p>$36.00 \dots = r^2$</p> <p>$6 = r$</p> <p>6m = r</p> <p>600 cm</p>	<p>A square flower bed has an area of 1225 ft^2. What is the side length in inches?</p>  <p>35 ft</p> <p>$1225 = s^2$</p> <p>$35 = s$</p> <p>420 in</p>	<p>A circle on the end of a telescope has an area of 28.27 cm^2. What is the length of the radius in inches?</p> <p>$28.27 = \pi r^2$</p> <p>$r = 3 \text{ cm}$</p>

$\frac{3}{2.54} = 1.18 \text{ in}$

5. 42 ounces is how many grams?

$$\frac{42}{1.75} = 1190.7g$$

1275 grams is how many pounds?

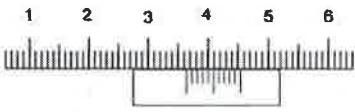
$$\frac{1275}{454} = 2.83 \text{ lbs}$$

4.25 meters is how many inches?

$$425 \text{ cm}$$

$$\frac{425}{2.54} = 167.3 \text{ inches}$$

6. What does this vernier caliper read as?



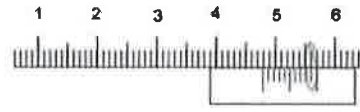
3.65

What does this vernier caliper read as?



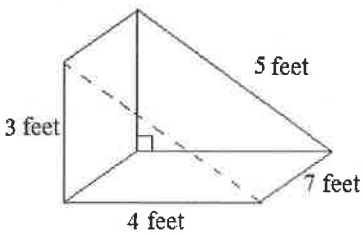
2.87

What does this vernier caliper read as?



4.79

7. Find the surface area:



2 Δ 's
 3 \square 's

$$2\left(\frac{1}{2} \cdot 3 \cdot 4\right) = 12$$

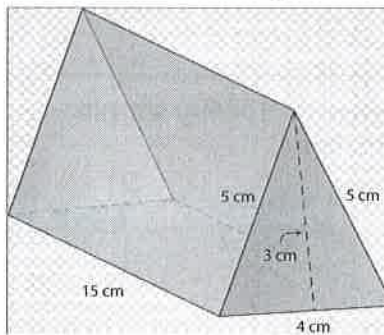
$$7 \times 5 = 35$$

$$7 \times 4 = 28$$

$$7 \times 3 = 21$$

$$96 \text{ ft}^2$$

Find the surface area:



2 Δ 's
 2 \square 's
 1 \square

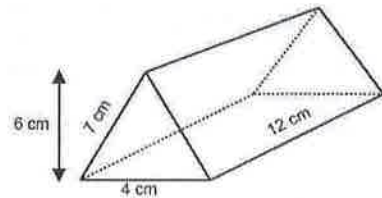
$$2\left(\frac{4 \cdot 3}{2}\right) = 12$$

$$4 \times 15 = 60$$

$$2(5 \times 15) = 150$$

$$222 \text{ cm}^2$$

Find the surface area:



2 Δ 's
 2 \square 's
 1 \square

$$2\left(\frac{4 \cdot 6}{2}\right) = 24$$

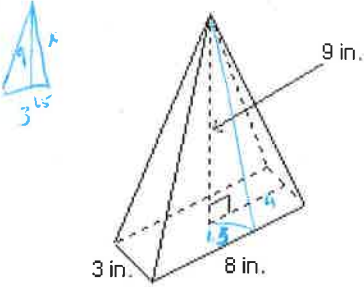
$$4 \times 12 = 48$$

$$2(7 \times 12) = 168$$

$$3240 \text{ cm}^2$$

See separate sheet for work

8. Find the surface area and volume of the following:



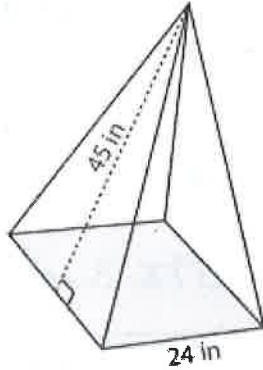
$$SA = \text{[scribbled out]}^2$$

$$126.54 \text{ in}^2$$

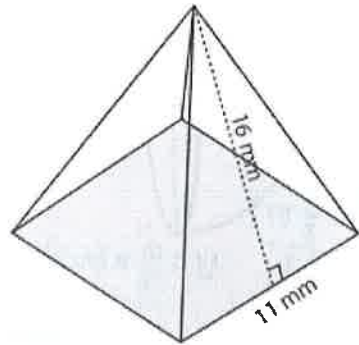


$$V = \frac{3 \times 8 \times 9}{3} = 72 \text{ in}^3$$

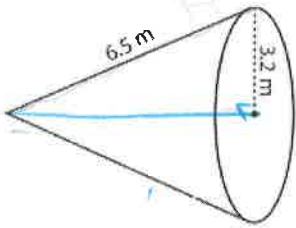
Find the surface area and volume of the following square based pyramid:



Find the surface area and volume of the following square based pyramid:



9. Find the surface area and volume of the following:



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

$$\pi(3.2)^2 + \pi(3.2)(6.5)$$

$$SA = 97.5 \text{ m}^2$$

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

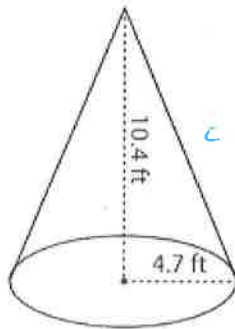
$$6.5^2 - 3.2^2 = h^2$$

$$h = 5.6577$$

$$V = \frac{1}{3} \pi (3.2)^2 (5.6577)$$

$$V = 60.67 \text{ m}^3$$

Find the surface area and volume of the following:



$$4.7^2 + 10.4^2 = c^2$$

$$c = 11.4127$$

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

$$\pi(4.7)^2 + \pi(4.7)(11.4127)$$

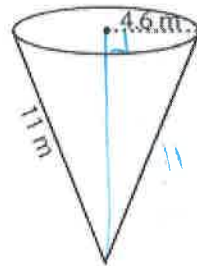
$$= 237.9 \text{ ft}^2$$

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

$$V = \frac{\pi(4.7)^2(10.4)}{3}$$

$$V = 240.6 \text{ ft}^3$$

Find the surface area and volume of the following:



$$11^2 - 4.6^2 = b^2$$

$$b = 9.9920$$

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

$$= \pi(4.6)^2 + \pi(4.6)(11)$$

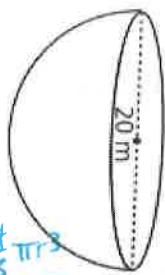
$$= 225.4$$

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

$$= \frac{\pi(4.6)^2(9.9920)}{3}$$

$$= 221.4 \text{ m}^3$$


10. Find the surface area and volume of the following:



$SA = \frac{4\pi r^2}{2} + \pi r^2$
 $= \frac{4\pi(10)^2}{2} + \pi(10)^2$
 $= 942.48$

$V = \frac{4}{3}\pi r^3$
 $V = \frac{4}{3}\pi(10)^3$
 $= 2094.42$

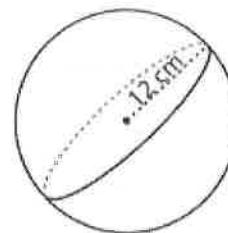
Find the surface area and volume of the following:



$SA = \frac{4\pi r^2}{2} + \pi r^2$
 $= 603.2 \text{ in}^2$

$V = \frac{4}{3}\pi r^3 \div 2$
 1072.3 in^3

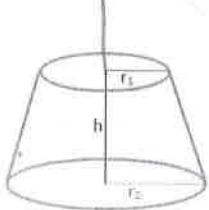
Find the surface area and volume of the following:



$SA = \frac{4\pi r^2}{2} + \pi r^2$
 $= 185.12 \text{ cm}^2$
 $= 2261.9 \text{ cm}^2$

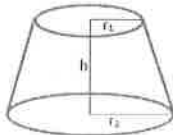
$V = \frac{4}{3}\pi r^3$
 $V = 7238.2$

11. A cone has its top cut off. Find the surface area and volume of the cone if the bottom circle has a radius of 6cm and the top circle has a radius of 3cm and the distance from the top to the bottom is 5cm

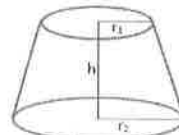


$SA = 306.24 \text{ cm}^2$
 $V = 329.87 \text{ cm}^3$

A cone has its top cut off. Find the surface area and volume of the cone if the bottom circle has a radius of 5cm and the top circle has a radius of 2cm and the distance from the top to the bottom is 6cm



A cone has its top cut off. Find the surface area and volume of the cone if the bottom circle has a radius of 10cm and the top circle has a radius of 3cm and the distance from the top to the bottom is 7cm



IN CLASS




12. Find the height of a cylinder if its volume is 6000 cm^3 and its radius is 5cm

$V = \pi r^2 h$
 $6000 = \pi(5)^2 h$
 $\frac{6000}{\pi(5)^2}$
 $76.4 = h$
 cm

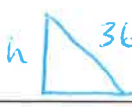
Find the radius of a sphere if its volume is 904 cm^3

$V = \frac{4}{3}\pi r^3$
 $904 = \frac{4}{3}\pi r^3$
 $2712 = 4\pi r^3$
 $215.8141 = r^3$
 $r = 6 \text{ cm}$

Find the height of a cone if the radius is 5 cm and the surface area is 650 cm^2



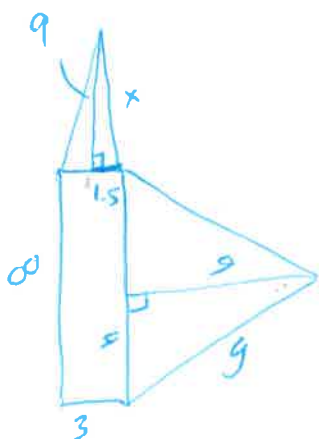
$SA = \pi r^2 + \pi r s$
 $650 = \pi(5)^2 + \pi(5)s$
 $S = 36.3803$



$36.3803^2 - 5^2 = h^2$

$S = 36.0$

(8)



$$1.5^2 + 9^2 = x^2$$

$$x = 9.1241$$

$$2\Delta's \quad 2 \left(\frac{8 \times 9.1241}{2} \right)$$

$$9^2 + 4^2 = y^2$$

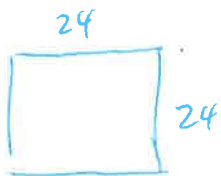
$$y = 9.8489$$

$$2\Delta's \quad 2 \left(\frac{3 \times 9.8489}{2} \right)$$

$$1 \square \quad 3 \times 8$$

$$TOTAL \quad 136.54$$

(8b)



$$SA = 4\Delta's + \square$$

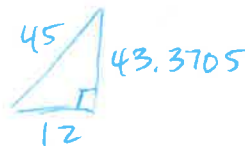
$$= 4 \left(\frac{24 \times 45}{2} \right) + 24^2$$

$$= 2736 \text{ in}^2$$

All triangles same

$$V = \frac{(24)^2 \cdot 43.3705}{3}$$

Need height for Volume



$$V = 8327.1 \text{ in}^3$$

(8c) All triangles same

$$SA = 4\Delta's + \square$$

$$= 4 \left(\frac{11 \times 16}{2} \right) + 11^2$$

$$= 473 \text{ mm}^2$$

Need height for Volume



$$16^2 - 5.5^2 = 15.0250$$

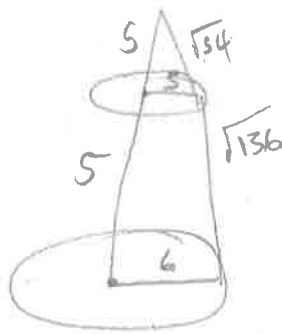
$$V = \frac{(11^2)(15.0250)}{3} = 606.0 \text{ mm}^3$$

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

$$\pi(6)^2 + \pi(6)(\sqrt{136})$$

$$- \pi(3)(\sqrt{34})$$

$$+ \pi(3)^2$$



$$SA = 306.24 \text{ cm}^2$$

$$V = \frac{1}{3} \pi r^2 h - \frac{1}{3} \pi r^2 h$$

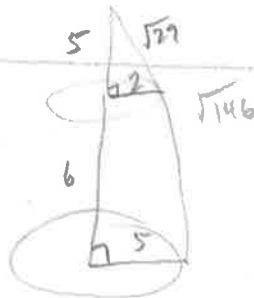
$$\frac{\pi(6)^2(10)}{3} - \frac{\pi(3)^2(5)}{3} = V = 329.87 \text{ cm}^3$$

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

$$\pi(5)^2 + \pi(5)(\sqrt{146})$$

$$- \pi(2)(\sqrt{29})$$

$$+ \pi(2)^2$$



$$SA = 247.07 \text{ cm}^2$$

$$V = \frac{1}{3} \pi r^2 h - \frac{1}{3} \pi r^2 h$$

$$\frac{\pi(5)^2(11)}{3} - \frac{\pi(2)^2(5)}{3}$$

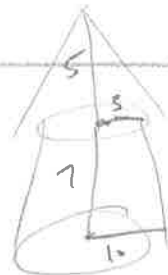
$$V = 267.04 \text{ cm}^3$$

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

$$\pi(10)^2 + \pi(10)(12)$$

$$- \pi(3)(5)$$

$$+ \pi(3)^2$$



$$SA = 672.3 \text{ cm}^2$$

$$V = \frac{1}{3} \pi r^2 h - \frac{1}{3} \pi r^2 h$$

$$= \frac{\pi(10)^2(12)}{3} - \frac{\pi(3)^2(5)}{3} =$$

$$V = 1209.5 \text{ cm}^3$$