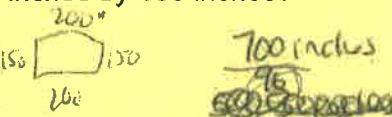
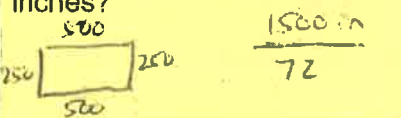
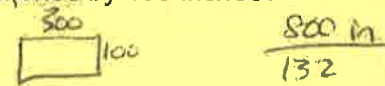

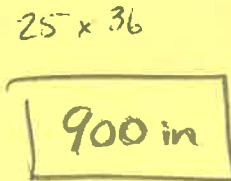
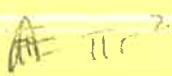
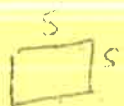


<p>1. Convert 100 inches into feet and inches</p> <p>8ft 4in</p>	<p>Convert 320 inches into feet and inches</p> <p>26ft 8in</p>	<p>Convert 205 inches into feet and inches</p> <p>17ft 1in</p>
<p>2. I am making a flower bed for my front lawn and need to buy the material in 8 ft lengths, how many boards would I need to purchase for a flower bed that is 200 inches by 150 inches?</p> <p>  </p> <p>8 boards</p>	<p>I am making a flower bed for my front lawn and need to buy 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>  </p> <p>21 boards</p>	<p>I am making a flower bed for my front lawn and need to buy 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>  </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>  </p> <p>1354.9 m</p>	<p>Convert 25 yds into inches</p> <p>  </p> <p>900 in</p>
<p>4. A circular carpet has an area of 113.10 m^2. What is the radius in cm?</p> <p>  </p> <p> $113.10 = \pi r^2$ $36.00 = r^2$ $6 = r$ $6 \text{ m} = r$ 600 cm </p>	<p>A square flower bed has an area of 1225 ft^2. What is the side length in inches?</p> <p>  </p> <p> $1225 = s^2$ $35 = s$ 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> $28.27 = \pi r^2$ $r = 3 \text{ cm}$ $\frac{3}{2.54} = 1.18 \text{ in}$ </p>

5. 42 ounces is how many grams?

$\frac{42}{1}$ 1190.7g

~~160g~~

~~1190.7g~~

1275 grams is how many pounds?

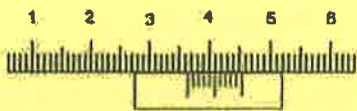
$\frac{1275}{454} = \text{2.83 lbs}$

4.25 meters is how many inches?

425 cm

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

6. What does this vernier caliper read as?



3.65

What does this vernier caliper read as?



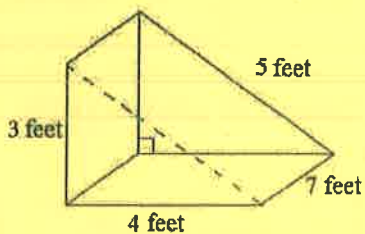
2.37

What does this vernier caliper read as?



4.79

7. Find the surface area:



2 Δ 's
3 \square 's

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

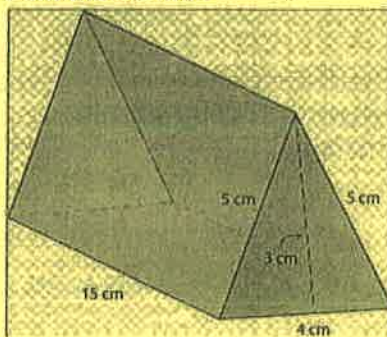
$7 \times 5 = 35$

$7 \times 4 = 28$

$7 \times 3 = 21$

96 ft²

Find the surface area:



2 Δ 's
2 \square 's
1 \square

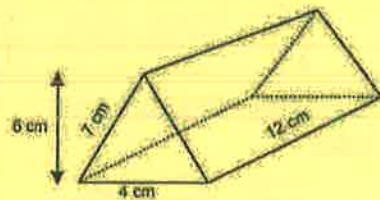
$2(\frac{4 \cdot 3}{2}) = 12$

$4 \times 15 = 60$

$2(5 \times 15) = 150$

222 cm²

Find the surface area:



2 Δ 's
2 \square 's
1 \square

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

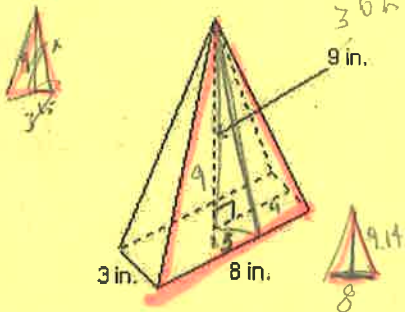
$4 \times 12 = 48$

$2(7 \times 12) = 168$

~~240 cm²~~

240 cm²

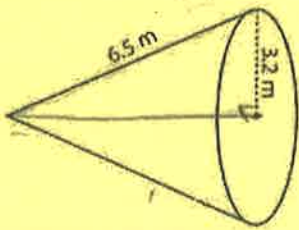
8. Find the surface area and volume of the following:



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

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

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



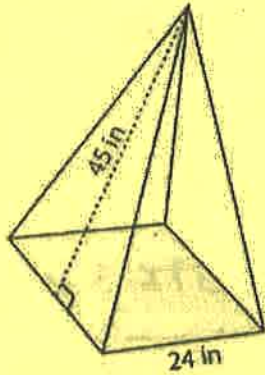
$SA = \pi r^2 + \pi r s$
 $\pi(3.2)^2 + \pi(3.2)(6.5)$
 $SA = 97.5 \text{ m}^2$

$V = \frac{1}{3} \pi r^2 h$
 $6.5^2 - 3.2^2 = h^2$
 $h = 5.6577$

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

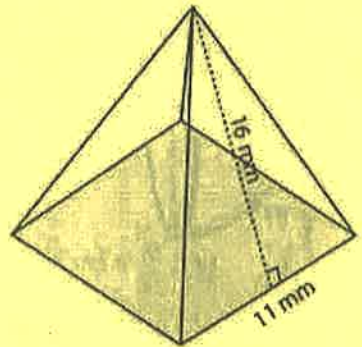
$V = 60.67 \text{ m}^3$

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

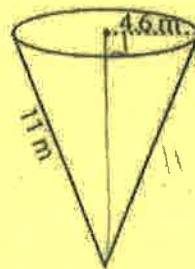


See end of practice test for solutions

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



Find the surface area and volume of the following:



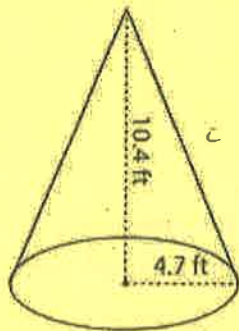
$11^2 - 4.6^2 = b^2$
 $b = 9.9920$

$SA = \pi r^2 + \pi r s$
 $= \pi(4.6)^2 + \pi(4.6)(11)$
 $= 225.4$

$V = \frac{1}{3} \pi r^2 h$
 $= \frac{\pi(4.6)^2(9.9920)}{3}$

$= 221.4 \text{ m}^3$

Find the surface area and volume of the following:



$4.7^2 + 10.4^2 = c^2$
 $c = 11.4127$

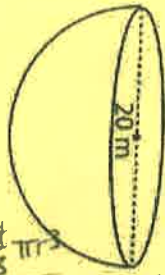
$SA = \pi r^2 + \pi r s$
 $\pi(4.7)^2 + \pi(4.7)(11.4127)$
 $= 237.9 \text{ ft}^2$

$V = \frac{1}{3} \pi r^2 h$
 $V = \frac{\pi(4.7)^2(10.4)}{3}$

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

See separate sheet for work.

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



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

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

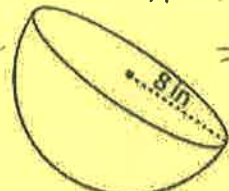
$$= 942.48$$

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

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

2094.40 cm³

Find the surface area and volume of the following:



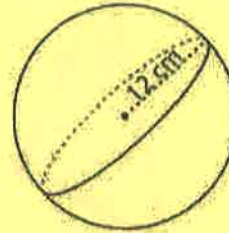
$$SA = \frac{4\pi r^2}{2} + \pi r^2$$

$$= 603.2 \text{ in}^2$$

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

1072.3 in³

Find the surface area and volume of the following:



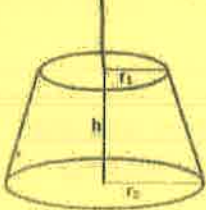
$$SA = 4\pi r^2$$

$$= 1809.56 \text{ cm}^2$$

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

7238.2 cm³

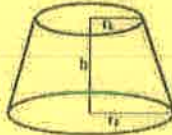
11. A cone has its top cut off. Find the surface area and volume of the cone if the bottom circle has a radius of 6cm and the top circle has a radius of 3cm and the distance from the top to the bottom is 5cm



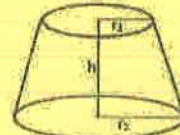
$$SA = 306.24 \text{ cm}^2$$

$$V = 329.87 \text{ cm}^3$$

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



12. Find the height of a cylinder if its volume is 6000 cm³ and its radius is 5cm

$$V = \pi r^2 h$$

$$6000 = \pi(5)^2 h$$

$$\frac{6000}{\pi(25)} = h$$

76.4 = h
cm

Find the radius of a sphere if its volume is 904 cm³

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


$$904 = \frac{4}{3}\pi r^3$$

$$2712 = 4\pi r^3$$

$$215.8141 = r^3$$

r = 6cm

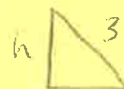
Find the height of a cone if the radius is 5 cm and the surface area is 650 cm²



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

$$650 = \pi(5)^2 + \pi(5)s$$

$$S = 36.3803$$



h = 36.3803

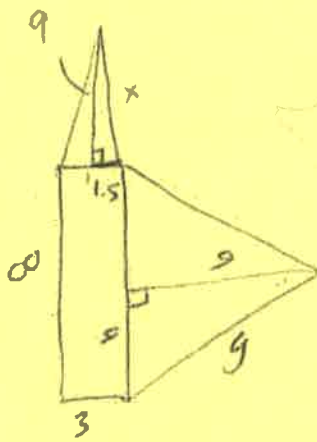
36.3803 = s

S = 36.0

IN CLASS



8)



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

$$x = 9.1241$$

$$2\Delta's \quad 2 \left(\frac{3 \times 9.1241}{2} \right)$$

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

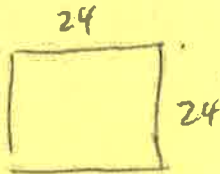
$$y = 9.8489$$

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

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

$$TOTAL \quad 126.94$$

8b)



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

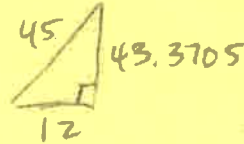
$$= 4 \left(\frac{24 \times 45}{2} \right) + 24^2$$

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

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



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

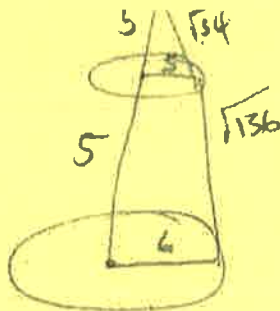
$$V = \frac{(11^2)(15.0250)}{3} = 606.0 \text{ mm}^3$$

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

$$\pi(6)^2 + \pi(6)(\sqrt{36})$$

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

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



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

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

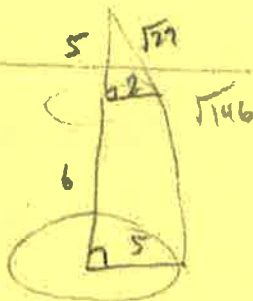
$$\frac{\pi(6)^2(10)}{3} - \frac{\pi(3)^2(5)}{3} = V = 329.87 \text{ cm}^3$$

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

$$\pi(5)^2 + \pi(5)(\sqrt{46})$$

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

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



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

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

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

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

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

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

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

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



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

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

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

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