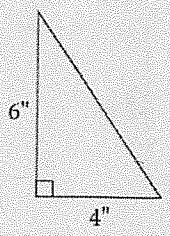
5

8 | Unit 7 10P Date:_____ Name:_____

DAY 5 – Surface Area & Volume

Find area and perimeter



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

$A = \frac{(4)(6)}{2}$

$A = 12\ in^2$

$P = a+b+c$ ← need to find 1st

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

$6^2+4^2=c^2$

$36+16=c^2$

$\sqrt{52}=\sqrt{c^2}$ ∴ $c = 7.2$

$P = a+b+c$

$P = 4+6+7.2$

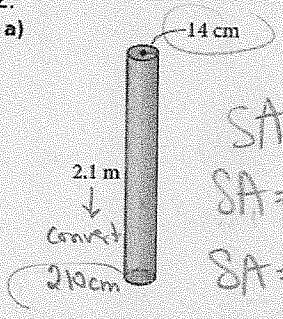
$P = 17.2\ in$

4

Find the surface area for the shapes in the **left column** and volume for the shapes in the **right column**. Record units in your answer

2.

a)



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

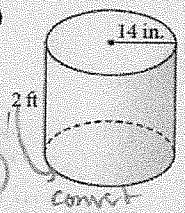
$SA = 2(3.14)(14)^2 + 2(3.14)(14)(210)$

$SA = 2(3.14)(196) + 2(3.14)(14)(210)$

$= 1230.88 + 18463.2$

$= 19694.08\ cm^2$

b)



$V = \pi r^2 h$

$V = (3.14)(14)^2(24)$

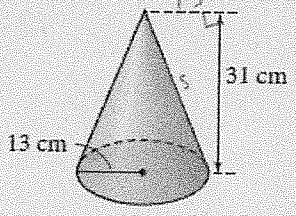
$V = (3.14)(196)(24)$

$V = 14770.56\ in^3$

4

3.

a)



Find s

$13^2+31^2=s^2$

$169+961=s^2$

$\sqrt{1130}=\sqrt{s^2}$

$33.6 \doteq s$

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

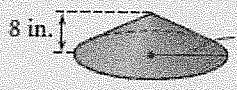
$SA = 3.14(13)^2 + (3.14)(13)(33.6)$

$= 3.14(169) + (3.14)(13)(33.6)$

$= 530.66 + 1371.552$

$= 1902.2\ cm^2$

b)



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

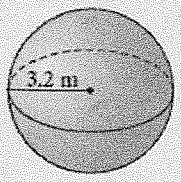
$V = \frac{(3.14)(21)^2(8)}{3}$

$V = \frac{(3.14)(441)(8)}{3} = 3692.64\ in^3$

4

4.

a)



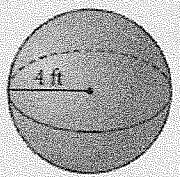
$SA = 4\pi r^2$

$= 4(3.14)(3.2)^2$

$= 4(3.14)(10.24)$

$= 128.6\ m^2$

b)



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

$= \frac{4(3.14)(4)^3}{3}$

$= \frac{4(3.14)(64)}{3}$

$= 267.9\ ft^3$

4

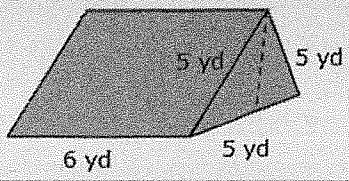
16

9 5

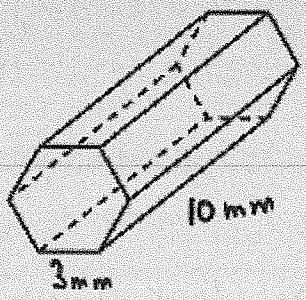
~~10~~ 6 | Unit 7 **10P** Date:_____ Name:_____

Draw the nets for each object. No other calculations necessary

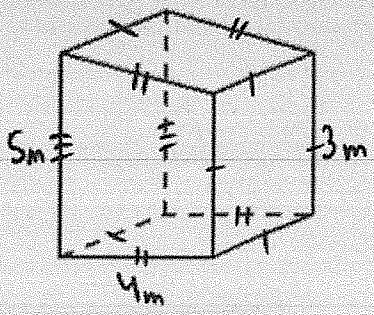
5.

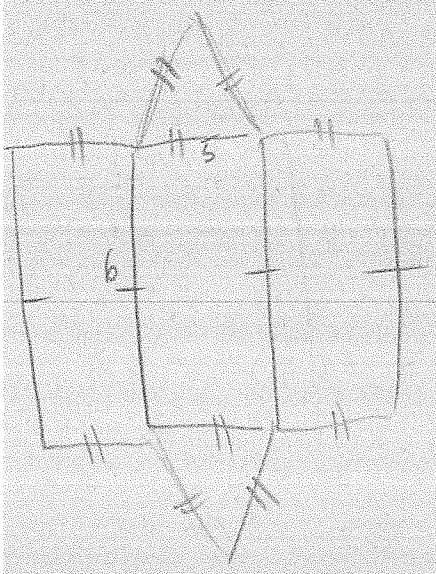


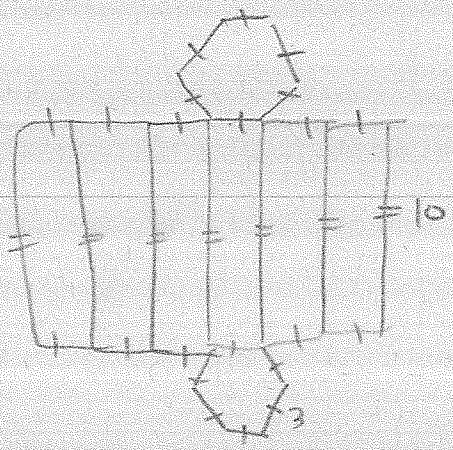
6.

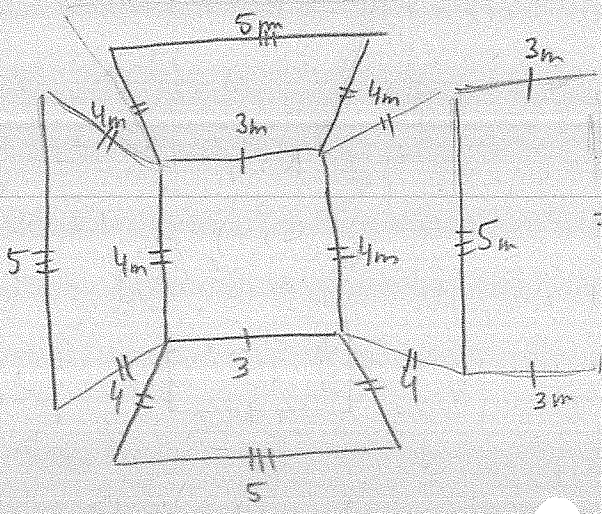


7.





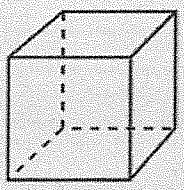




6

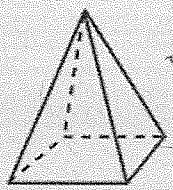
Match the following objects to their nets

8.



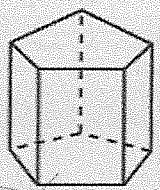
C

9.



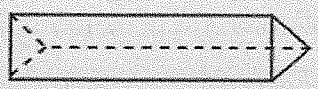
D

10.



B

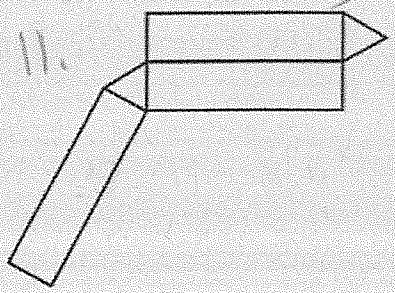
11.



A

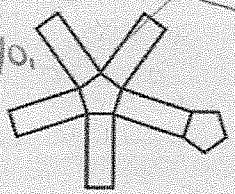
4

A.



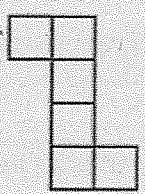
11.

B.



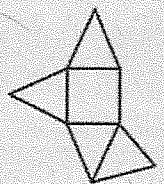
10.

C.



8.

D.



9.

~~10~~ 6

10