

# Geometry Pd 4 & 5 Schedule for Week April 22-26

Monday - Review Surface Area Material and prepare notes for tomorrow's test

Tuesday - TEST on Surface Area

Wednesday - Collect all notes from Volume unit & Surface Area unit

- Start notes and exercises on the Circle Segment Sections from chapter 10 in our book (1,3,7,8) See slideshow for more information

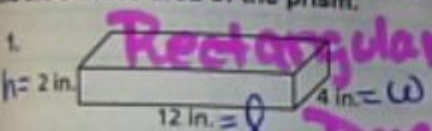
Thursday - Assignment 10.1 online [bigideasmath.com](http://bigideasmath.com)

Friday - Notes on 10.3 CHORDS with diameters and review TANGENT

# Review of Prism Surface Area - piece by piece

Pg 313

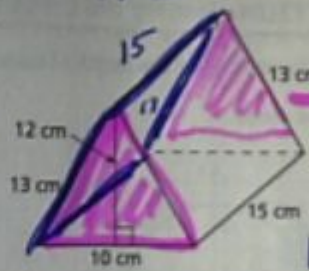
Find the surface area of the prism.

1.  **Rectangular Prism**

$160 \text{ in}^2$

Formula from Sheet

$$SA = \underbrace{2lw}_{\text{Bottom Top}} + \underbrace{2lh}_{\text{Front Back}} + \underbrace{2wh}_{\text{Left Right}}$$

2.  **Triangular Prism**

Lateral = SA - Bases Area

$660 \text{ cm}^2$  (directly)

NOT on f. sheet

Front  $A = \frac{1}{2}(10)(12) = 60$   
 Back  $A = 60$   
 Bottom  $A = 10(15) = 150$   
 Left  $A = 13(15) = 195$   
 Right  $A = 13(15) = 195$

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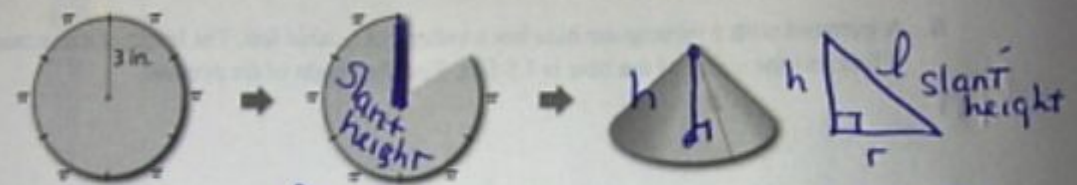
Total  $660 \text{ cm}^2$

Find the missing dimension.

2. A rectangle has an area of 25 square inches and a length of 10 inches. What is the width of the rectangle?

# 11.7 Cone Surface area has slant height needed vs altitude

circumference of the circle into six equal parts, and label the length of each part. Then cut out one sector of the circle and make a cone.

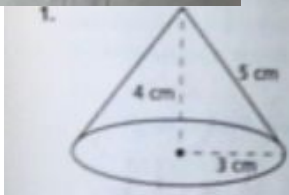


$$SA = \pi r^2 + \text{Lateral wrap} = \pi r^2 + \pi r \sqrt{r^2 + h^2}$$

a. Explain why the base of the cone is a circle. What are the circumference and radius of the base?

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

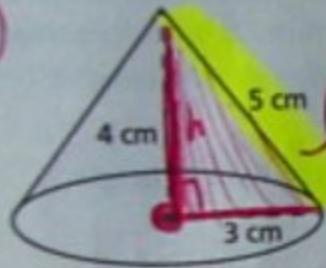
and the surface area of the right cone.



2. A right cone has a diameter of 1.8 inches and a height of 3 inches.

In Exercises 1 and 2, find the surface area of the right cone.

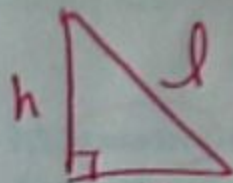
1.



$$SA = 75.4$$

$l$  = slant height

4 = altitude  
height



$$r^2 + h^2 = l^2$$

2. A right cone has a diameter of 1.8 inches and a height of 3 inches.

$$SA = 11.4 \text{ in}^2$$



$$d = 1.8$$

$$r = 0.9$$

$$SA = \pi r^2 + \pi r l$$
$$SA = \pi r^2 + \pi r \sqrt{r^2 + h^2}$$

# SJ 11.8 Sphere

Hemisphere

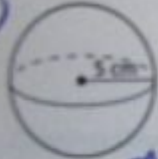
Do you want only the


Top dome


Or


Include a base circle

Extra Practice  
In Exercises 1-4, find the surface area of the solid.

1.   $SA = 4\pi r^2$   
 $SA = 4\pi(5^2)$   
 $SA = 100\pi = 314.16 \text{ cm}^2$

2.   $SA = 4\pi r^2$   
 $r = 1$   
Hemisphere =  $\frac{4\pi}{2} = 2\pi$  Dome Only  
Add on Floor Base Circle Area =  $\pi r^2$   
 $B = 1\pi$   
Total SA =  $3\pi$

3. 

4. 

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# Page 1 & 2 for Kuta Surface Area sheet

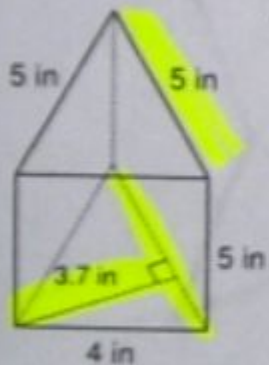
This is the video link for solutions worked out.

<https://www.youtube.com/watch?v=CzTQELWR0wM&t=2s>

This is the pdf of answers only

<https://cdn.kutasoftware.com/Worksheets/PreAlg/Surface%20Area%20of%20Solid%20s.pdf>

5)



Triangular  
Prism  
5 faces

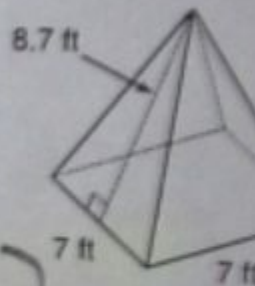
2 Triangles

$$\frac{1}{2} (5)(3.7) =$$

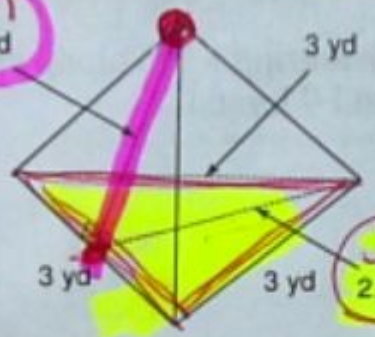
3 Rectangles

$$5 \cdot 5 + 5 \cdot 4 + 5 \cdot 5 =$$

6)



7)  $h$   
2.2 yd



Triangular  
Pyramid

13.8

$b$   
2.6 yd

Base  
 $\frac{1}{2}bh$

3.9 =  $\frac{1}{2}(3)(2.6)$

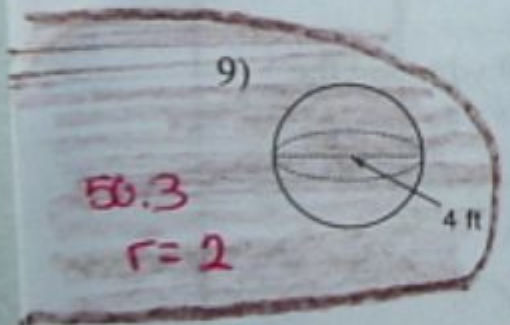
Lateral face  
Triangles

= 3 •  $\frac{1}{2}(3)(2.2)$

= 3 • 3.3

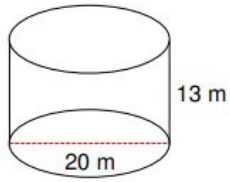
= 9.9

Total = 3.9 + 9.9 = 13.8





13)



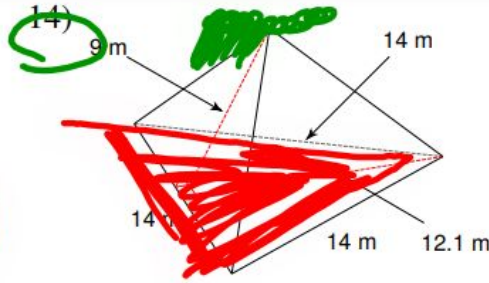
1445.1 m<sup>2</sup>

Base

$$\frac{1}{2} (12.1)(14)$$

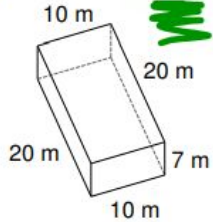
± Lateral  $\Delta$

$$\left[ \frac{1}{2} (9)(14) \right] \times 16$$

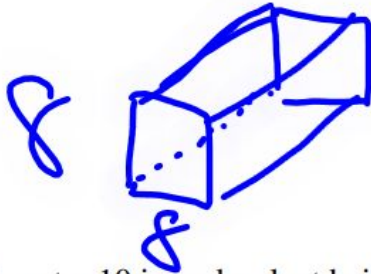


273.7 m<sup>2</sup>

15)



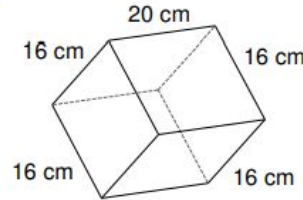
820 m<sup>2</sup>



$$8 \cdot 8 + 4(8 \cdot 9) =$$

17) A cone with diameter 10 in and a slant height of 13 in.

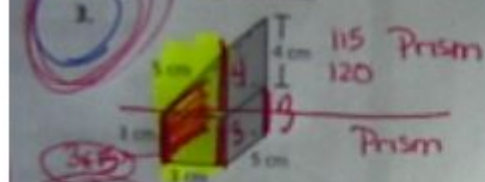
16)



1792 cm<sup>2</sup>

18) A square prism measuring 8 km along each edge of the base and 9 km tall.

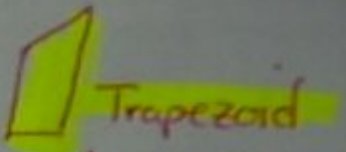
1. e up the composite solid. Then find  
or answer to the nearest tenth.



~~115~~  
~~120~~  
Composite Solids

$$\frac{120}{\text{cm}^2}$$

Front:



Trapezoid  
 $A = \frac{1}{2}(h)(a+b)$   
 $A = \frac{1}{2}(3)(7+3)$

Back:

$$A = 15$$

$$A = 15$$

Left

$$3 \times 5 = 15$$

Right

$$5 \times 7 = 35$$

Bottom

$$3 \times 5 = 15$$

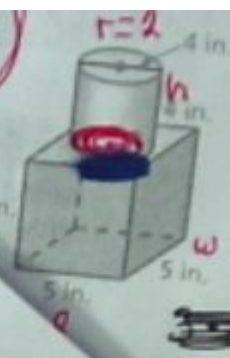
Top

$$5 \times 3 = 15$$

$$\frac{1}{2} 2\pi r^2 + 2\pi rh = \text{Cylinder}$$

$$2lw + 2lh + 2lh = \text{Prism}$$

$$-2\pi r^2 = \text{Off (2 circles)}$$



Short cut  
wrap  
Full Prism

$$2\pi(2)(4) + 6(25)$$


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200.3

Top  $\pi r^2 = \pi(2^2) = 12.6$

Wrap  $2\pi rh = 2\pi(2)(4) = 50.3$

Center Top Prism  $(5.5 - \pi(2^2)) = 12.4$

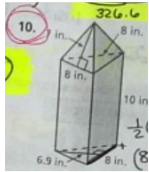
Left + Right  $(2(5.5)) = 50$

Front + Back  $(2(5.5)) = 50$

Bottom  $5.5 = 25$

200.3

# Day 5 Review -- TEST on Day 6 on surface area



Pyramidal  
Prism

$$\begin{array}{l} \text{Face} \\ 3 \left( \frac{1}{2} \cdot 8 \cdot 7 \right) \\ 3 (8 \cdot 10) \end{array}$$

$$\text{Triangle Base} \quad 1 \left( \frac{1}{2} \cdot 6.9 \cdot 8 \right)$$

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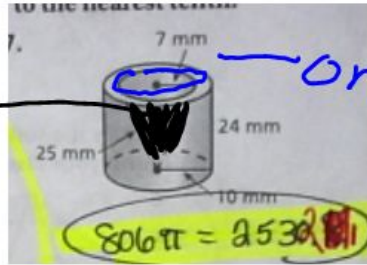
$$\text{Total} \quad 351.6 \text{ m}^2$$

#10 of the last pg 286

Work it out face by face of the figure

#17 worksheet --- use colors to see the parts (Faces)

Cylinder - Cone



one circle off  
to open

inside wall  
wrap

inside wall

$$2\pi r^2 + 2\pi r h$$

$$2\pi (10^2) + 2\pi (10)(24)$$

circle

$$- \pi (7)^2 + \pi (7)(25)$$