

ALL Geometry - Surface Area

Q4 April 12 started -
Mrs. Pletcher
Pd 3 CP Pd 4 & 5 Regular

Schedule: Geometry April 15-19

Monday (A day - homeroom 9th)

- Period 3 --- Start problems from the Packet as directed on slide for Day 2
- Period 4 & 5 --- collect notes on volume and do the Friday Surface Area introduction as directed on Day 1 of slides

Tuesday

- Period 3 --- Day 3 slide on slant height versus altitude and complete pages in packet
- Period 4 & 5 --- Day 2

Wednesday

- Period 3 --- Day 4 slide on composite solid's surface area
- Period 4 & 5 --- Day 3

Thursday --- (FBLA students take the past volume test in class if needed or 9th pd.)

- Period 3 --- Day 5 - review with cutout composite solids
- Period 4 & 5 --- Day 4

Friday

- Period 3 --- Day 6 TEST
- Period 4 & 5 --- Day 5 Review with test on Monday or Tuesday next week

Day 1: Surface Area - shell of outside faces of shape

Do Student journal pg. 313

Given state formula sheet ---- prism, pyramid, cone, cylinder, sphere

Specific solids such as triangular prism --- think of each face area

Composite Shapes -

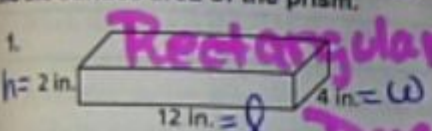
-- think about removing covered areas that are “inside” shell.

Do Student Journal pg. 344 To discuss cone’s surface area pieces.

Link to cylinder and continue to pg. 347 & 249

Review of Prism Surface Area - piece by piece

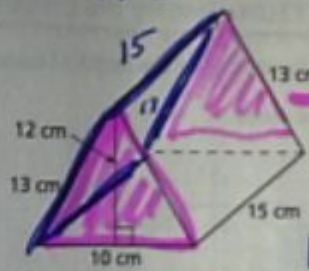
Find the surface area of the prism. Pg 313

1.  **Rectangular Prism**

160 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 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 $A = 13(15) = 195$

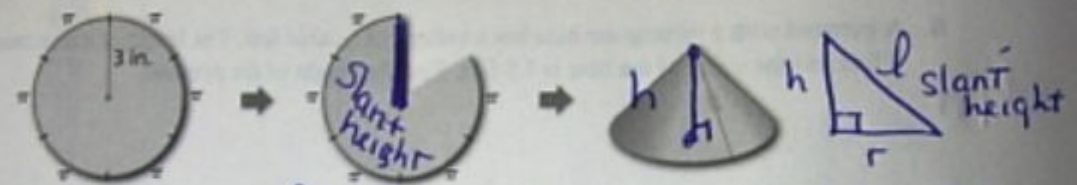
Total 660 cm^2

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.

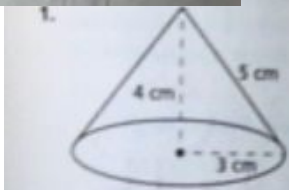


$$SA = \pi r^2 + \text{Lateral wrap} = \pi r^2 + \pi r \sqrt{r^2 + h^2}$$

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.

SJ 11.8 Sphere

Hemisphere

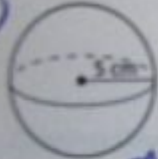

Do you want only the



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

352 Geometry Student Journal

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Day 2: Surface area slant height from altitude in pyramids

Warmup: Packet page 3 side and 4 on naming it from the “nets”

Label the slant height and measures of some to make it more descriptive.

If needed, use edpuzzle as example

<https://edpuzzle.com/media/656888afa2a33541877ff62b>

Practice work in packet from page side 1 & 2 is a kuta software sheet so youtube videos if needed.

Day 3: Composite Shapes -- covered faces to subtract

Use handout page 6th side and reference example 3 on it for notes.

Do #2 cone on a cylinder surface area which links to 6.6 Exercise #1,2 side 7 in packet

Students do #3 of prisms stacked.

Continue with # 3-11 and complete as homework.

Day 4: Cutout composite solids & surface area exposed

See last side (8 of packet) on composite solids - discuss # 18 on stacked cubes.

Discuss and find the surface area of exercises #15 - 17

Assign 11.5, 11.7 & 11.8 online with work to show on paper for credit.

SECTION 11.5 EXERCISES	11.5 S Area Pyramids Geometry: CC 2015 Problem Set: Custom (3/57) Start: 04/16/2024 7:59AM	Volumes of Prisms and Cylinders Students: All Due: 04/19/2024 7:59AM	0/10 STUDENTS SUBMITTED	0.0 AVG
SECTION 11.7 EXERCISES	11.7 Surface area Cones Geometry: CC 2015 Problem Set: Custom (5/30) Start: 04/16/2024 8:01AM	Surface Areas and Volumes of Cone Students: All Due: 04/19/2024 8:01AM		
SECTION 11.8 EXERCISES	11.8 S Area w/ spheres Geometry: CC 2015 Problem Set: Custom (8/51) Start: 04/16/2024 9:01AM	Surface Areas and Volumes of Spheres Students: All Due: 04/19/2024 9:01AM	0/10 STUDENTS SUBMITTED	0.0 AVG

Your note to students:
Remember all exercises need work submitted on paper for credit (11.5 thru 11.8)

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