

SOL HW Ch8R

April 10, 2017 2:28 PM

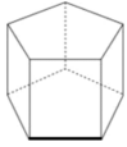



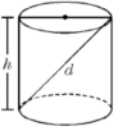
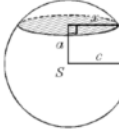
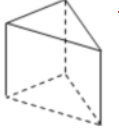
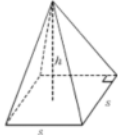
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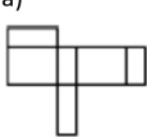
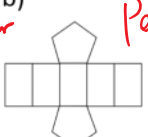

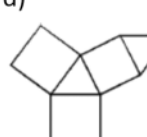
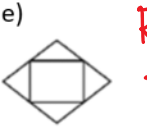


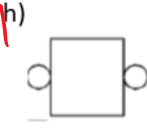
HW: Math 8 Chapter 8 Review Surface Area of 3D solids

1. Name each of the following solids by choosing a name underneath:


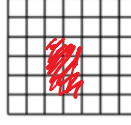
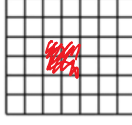
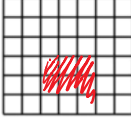
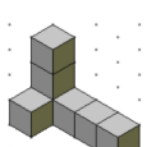
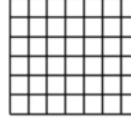
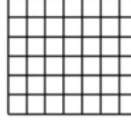
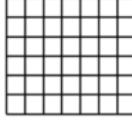
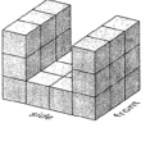
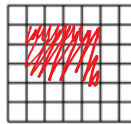
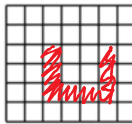
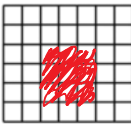
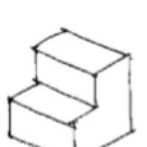
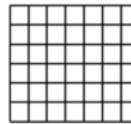
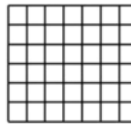
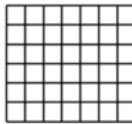
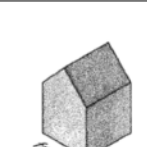

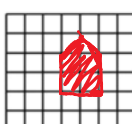
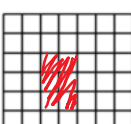
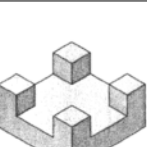
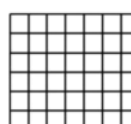
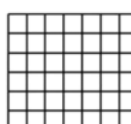
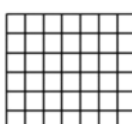
Cone, Sphere, Cylinder, Pentagonal Prism, Pentagonal Pyramid, Hexagonal Prism, Hexagonal Pyramid, Rectangular Pyramid, Rectangular Prism, Triangular Prism, Triangular Pyramid, Trapezoidal Prism

 PENTAGONAL PRISM	 Hexagonal Pyramid	 Triangular Prism	 Cone
 Cylinder	 Sphere	 Triangular Prism	 Rectangular Pyramid

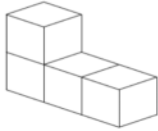
2. Name the solid given each net:

a)  Rectangular Prism	b)  Pentagonal Prism	c)  Cone	d)  Triangular Prism
e)  Rectangular Pyramid	f)  Triangular Pyramid	g)  Trapezoidal Prism	h)  Cylinder

3. Given each image on the left, draw the front, top, and side views

4. Draw a Net for the following solid and find the surface area



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5. Find the surface area of the following solid. Show your calculations with the space provided:

$12^2 + 9^2 = x^2$ $12 \times 9 + 12 \times 18 + 9 \times 18$ $x = 15 = 108 + 216 + 162$ $= 486$ $486 + 15 \times 18$ $= 756$	<p>$h = 24\text{cm}, r = 40\text{cm}$</p> $40^2 \times \pi \times 2 + 24 \times 60 \times \pi$ $= 1600 \times \pi \times 2 + 1440 \pi$ $= 3200\pi + 1440\pi$ $= 3640\pi$																					
$2 \times (20 \times 8 + 16 \times 8) + 16 \times 20$ $= 2 \times (160 + 128) + 320$ $= 576 + 320$ $= 896$ $16 \times 20 + 16 \times 16 + 20 \times 16 \times 2$ $= 320 + 160 + 400$ $= 880$	$2 \times 2 \times 5 = 20$ $2 \times (4 \times 4 + 2 \times 4 + 2 \times 4)$ $= 2 \times (16 + 8 + 8)$ $= 2 \times 32 = 64$ $64 - (2 \times 2) = 60$ $60 + 20 = 80$																					
$2 \times \pi r^2 + 2\pi r \times h$ $2 \times 9\pi \quad 6\pi \times h$ $= 18\pi \quad 6\pi \times 5$ $= 30\pi$ $18\pi + 30\pi = 48\pi \text{ cm}^2$	<p>Each block is 1cm by 1cm by 1cm</p> <table border="0"> <tr> <td></td> <td>Front</td> <td>Back</td> </tr> <tr> <td></td> <td>6</td> <td>6</td> </tr> <tr> <td></td> <td>Top</td> <td>bottom</td> </tr> <tr> <td>12</td> <td>3</td> <td>3</td> </tr> <tr> <td>6</td> <td></td> <td></td> </tr> <tr> <td>+ 6</td> <td>Left</td> <td>Right</td> </tr> <tr> <td><hr/>24cm²</td> <td>3</td> <td>3</td> </tr> </table>		Front	Back		6	6		Top	bottom	12	3	3	6			+ 6	Left	Right	<hr/> 24cm ²	3	3
	Front	Back																				
	6	6																				
	Top	bottom																				
12	3	3																				
6																						
+ 6	Left	Right																				
<hr/> 24cm ²	3	3																				

$x = 12\text{ cm}, y = 6\text{ cm}$

$D = 6\text{ cm}$
 $H = 12\text{ cm}$

T	B
10.5×7.6	10.5×7.6
L	R
8.4×7.6	8.4×7.6
F	B
8.4×10.5	8.4×10.5

$10.5 \times 7.6 = 79.8$
 $8.4 \times 10.5 = 88.2$
 $8.4 \times 7.6 = 63.84$

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

$$2 \times 7.84\pi \left\{ \begin{array}{l} 7.84 \times h \times \pi \\ 7.84 \times 3.7 \times \pi \\ 29.008 \times \pi \end{array} \right.$$

$$= 15.68\pi$$

$$29.008\pi + 15.68\pi = 44.688\pi \text{ cm}^2$$

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

$$2 \times \pi(5)^2 = 50\pi$$

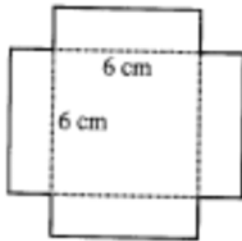
$$2 \times 25 \times \pi = 50\pi$$

$$300\pi + 50\pi = 350\pi \text{ cm}^2$$

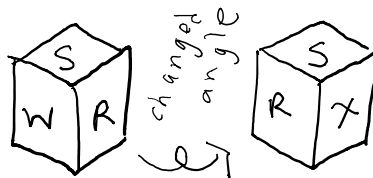
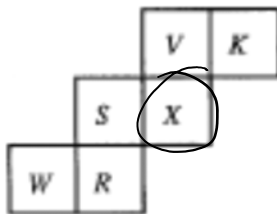
Front	Back
$20 \times 10 = 200$	$20 \times 10 = 200$
Left	Right
$10 \times 30 = 300$	$10 \times 30 = 300$
Top	Bottom
$\pi \times d$	$20 \times 30 = 600$
$\pi \times 20 = 20\pi$	

$200 + 200 + 300 + 300 + 600 + 20\pi$

6. A square sheet of metal has four smaller squares removed from the corners as shown in the diagram. The metal is folded along the dotted lines to form an open box having 6cm by 6cm and volume 72cm^3 . What is the height and surface area of the box?

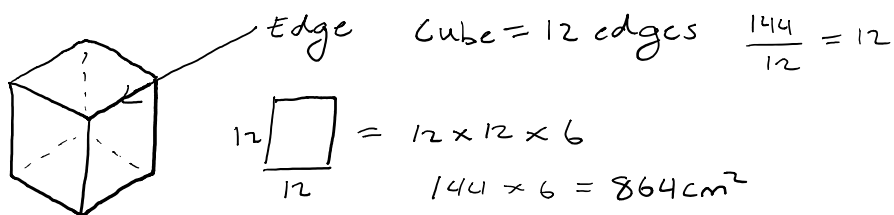


7. When the figure is cut out and folded to make a cube, the letter W is on one face. Which letter is on the opposite face?



X is opposite of W

8. The sum of all the edges of a cube is 144cm. What is the surface area of the cube?



9. Challenge: A $5 \times 5 \times 5$ cube is formed by using $1 \times 1 \times 1$ cubes. A number of smaller cubes are removed by punching out the 15 designated columns from front to back, top to bottom, and side to side. How many smaller cubes remain?

