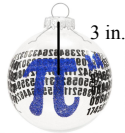


Problem of the Day: Find the volume of the object.
Leave in terms of π .





Plan for the Day: Integer quiz (if needed)
Go over last week's homework
Notes on surface area of rectangular prisms
Objective: We will be able to find the surface area of a rectangular prism.
Happy belated Birthday to Aleecia Walton!!

3. $55 + \frac{1}{4}x = 45 + \frac{7}{20}x$

5. $500 - 20x < 220 + 35x$
loan \$

6. $V = Bh$ $B = \frac{1}{2}bh$
 $V = \frac{1}{2}bh \cdot h$
 $V = \frac{1}{2} \cdot 4 \cdot 1 \cdot 10 \cdot 4$
 $V = 82 m^3$

Surface area - sum of all the areas of all the surfaces on a solid
It is also the total area of the net of a solid
You can use a net or a formula to find the surface area of a shape.
Surface area is still an area because it does not have any thickness. Surface area is always given using square units (like cm^2 or $in.^2$).

Lateral surface area - the sum of the lateral surfaces (called faces or sides) of a solid like paint on a wall.

Total surface area - the sum of the lateral surfaces and the area of the bases like wrapping a present.


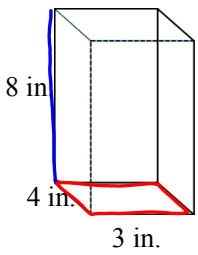
The formula for lateral surface area is
 $S = Ph$
where P = perimeter of the base and h = height of the prism.

$S = Ph$

32
48
32
48
+ 160 cm²

20 · 8 = 160 cm²

Example 1: Find the lateral surface area of the prism.



$LSA = Ph$
 $14 \cdot 8$
 $P = 3 + 4 + 4 = 14$
 $LSA = 112 \text{ in}^2$

Example 2: Find the lateral surface area of the prism.

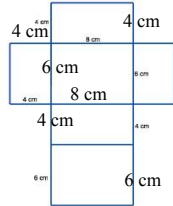
$LSA = Ph$
 $24 \cdot 4$
 $8 + 4 + 8 = 24 = P$
 96 ft^2



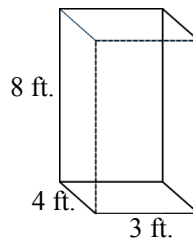
The formula to find the total surface area of a prism is

$$S = Ph + 2B$$

where P is the perimeter of the base, h is the height of the prism, and B is the area of the base



Example 3: Find the total surface area of the prism.



Example 4: Find the total surface area of the object.



Example 5: Bob made this box shown below in shop. He wants to paint it before taking it home. How much paint will he need to cover the entire box with one coat of paint?

