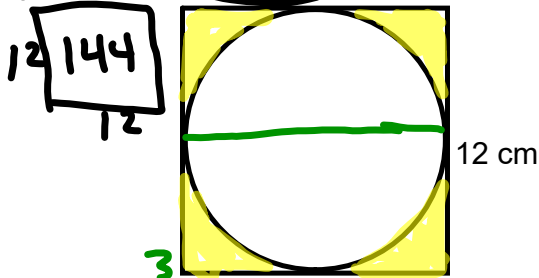


You need out your warm up, agenda, & hw

Homework: Surface Area Practice

Warm Up:

1) Find the area of the shaded region:



$$\begin{array}{r} 12 \boxed{144} \\ 12 \\ \hline 144.00 \\ - 113.04 \\ \hline 30.96 \end{array}$$

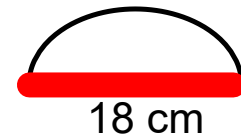
$d = 12$
 $r = 6$

$$\pi \cdot r \cdot r$$

$$3.14 \cdot 6 \cdot 6$$

$$113.04$$

2) Find the area:



$r = 9$

$$3.14 \times 9 \times 9 = 254.34$$

$$\boxed{127.17}$$

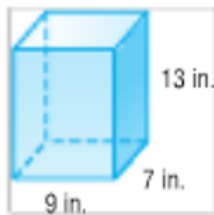
Surface Area of Prisms

The sum of the areas of all the surfaces, or faces, of a three-dimensional figure is the

Surface Area

**SURFACE AREA OF A RECTANGULAR
PRISM:**

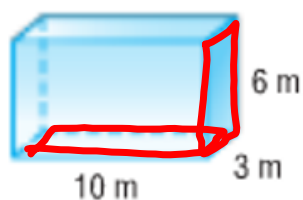
$$SA = 2lh + 2lw + 2hw$$



$$SA = 2lh + 2lw + 2hw$$

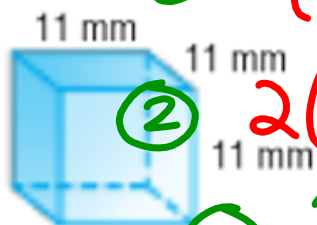
$$SA = \underline{2}(9 \times 7) + \underline{2}(9 \times 13) + \underline{2}(7 \times 13) \quad \text{Multiply first, then add}$$
$$126 \quad + \quad 234 \quad + \quad \underline{182} = 542$$

Example 1:



$$\begin{aligned} & 2(10 \times 3) + 2(3 \times 6) + 2(10 \cdot 6) \\ & 2(30) + 2(18) + 2(60) \\ & 60 + 36 + 120 \\ & \boxed{216\text{m}^2} \end{aligned}$$

Example 2:



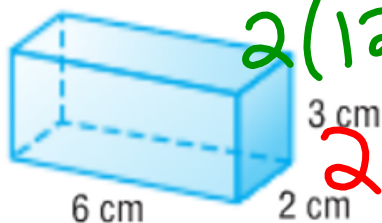
$$\textcircled{1} 2(11 \times 11) + 2(11 \times 11) + 2(11 \times 11)$$

$$\textcircled{2} 2(121) + 2(121) + 2(121)$$

$$\textcircled{3} 242 + 242 + 242$$

$$\textcircled{726 \text{ mm}^2}$$

You try!

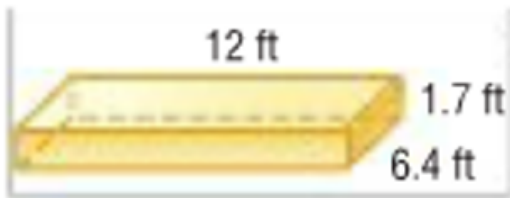


$$2(6 \times 2) + 2(6 \cdot 3) + 2(2 \cdot 3)$$

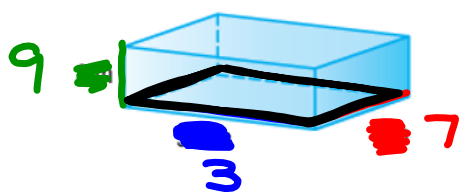
$$2(12) + 2(18) + 2(6)$$

$$24 + 36 + 12$$

$$72 \text{ cm}^2$$



Josh is painting a box with the following dimensions: length of 3 inches, width of 7 inches, and height of 9 inches. If he wants to paint all of the sides except the bottom, how much of the box will be painted? (Hint: draw a picture)



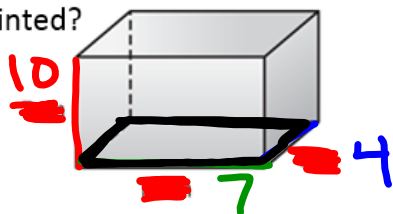
$$1(3 \cdot 7) + 2(7 \times 9) + 2(9 \cdot 3)$$

$$21 + 2(63) + 2(27)$$

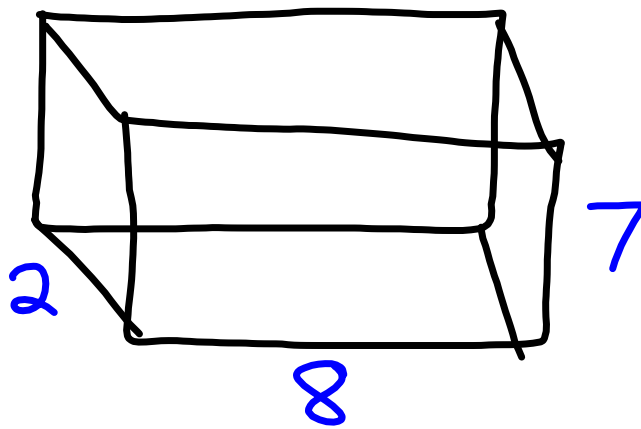
$$21 + 126 + 54$$

$$\boxed{201 \text{ in}^2}$$

-Madison is painting a toy box with dimensions: length 7 inches, width 4 inches, and height 10 inches. If she wants to paint all of the sides except the top, how much of the box will be painted?



$$1(7 \cdot 4) + 2(4 \cdot 10) + 2(7 \cdot 10)$$
$$28 + 80 + 140$$
$$248$$



SIT SILENTLY