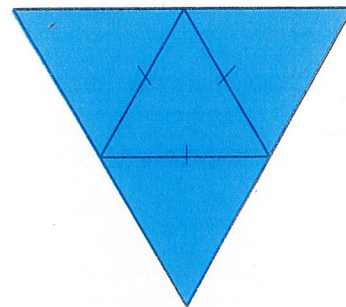
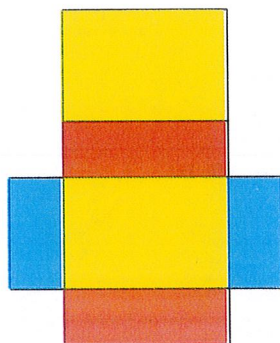
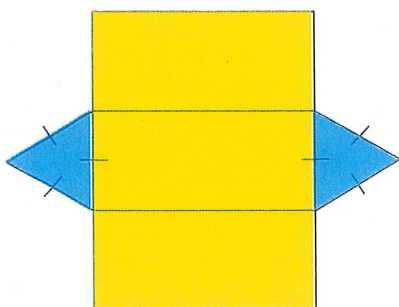


SURFACE AREA OF NETS

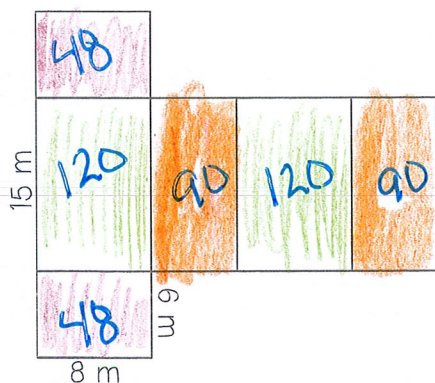
TOTAL SURFACE AREA

- Total surface area is the covering of the areas of all faces, including the bases.
- Within a net there can be congruent figures which are the same size and shape.

Look at the nets below; label or color each of the congruent shapes within each net.



1. Decompose each net into different congruent figures; then, find the area of each figure.



	SHAPE 1	SHAPE 2	SHAPE 3
FORMULA	$A = b \cdot h$	$A = b \cdot h$	$A = b \cdot h$
PLUG IN VALUES	$A = 15 \cdot 8$	$A = 8 \cdot 6$	$A = 15 \cdot 6$
AREA	$A = 120$	$A = 48$	$A = 90$
TOTAL SURFACE AREA	516 m^2		

$$2(120) + 2(48) + 2(90)$$

a. What pattern do you notice when finding the total surface area of the rectangular prism?

Ex: Since there are three different rectangles, you can find the area of the three different rectangles and then multiply by 2 to find the total surface area.

b. If the net above was a triangular prism, then what would change about the process?

A triangular prism would have a triangular base. Therefore, you would use $A = \frac{b \cdot h}{2}$ to find the area.

Find the surface area of the nets below; use the tables to help you.

2.

	SHAPE 1	SHAPE 2	SHAPE 3
FORMULA	$A = b \cdot h$	$A = \frac{b \cdot h}{2}$	N/A
PLUG IN VALUES	$A = 18 \cdot 8$	$A = \frac{8 \cdot 7}{2}$	N/A
AREA	$A = 144$	$A = 28$	N/A
TOTAL SURFACE AREA	488 cm^2		

$2(28) + 3(144)$

3.

	SHAPE 1	SHAPE 2	SHAPE 3
FORMULA	$A = b \cdot h$	$A = \frac{b \cdot h}{2}$	$A = \frac{b \cdot h}{2}$
PLUG IN VALUES	$A = 6 \cdot 4$	$A = \frac{6 \cdot 6}{2}$	$A = \frac{7 \cdot 4}{2}$
AREA	$A = 24$	$A = 18$	$A = 14$
TOTAL SURFACE AREA	88 in^2		

$2(24) + 2(18) + 2(14)$

Use your understanding of nets and surface area to answer the questions below.

4. The surface area of the cube is 150 in^2 . What is the length of the side of the cube?

$A = 6s^2$ or $A = 6a^2$
 $\frac{150}{6} = \frac{6a^2}{6}$
 $25 = a^2$
 $a = 5$

5. Find the surface area of the triangular pyramid.

172 m^2

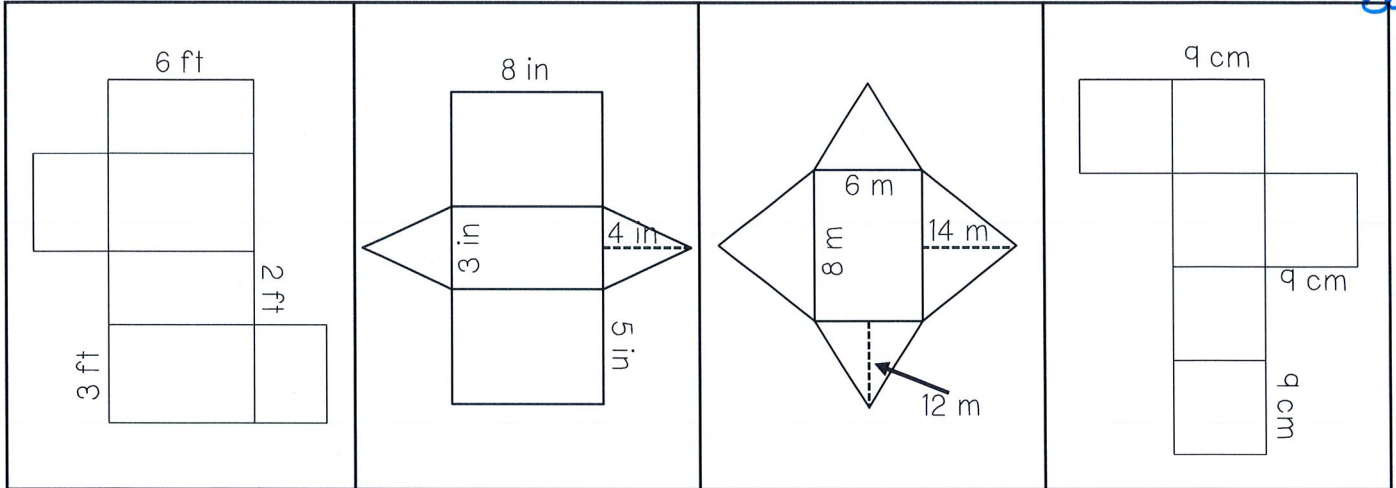
Summarize today's lesson:

* Choose any 3

SURFACE AREA OF NETS

* If you do All 4, you get a bonus!

Find the surface area of each of the nets below. Label each congruent figure.



RECTANGULAR PRISM

	SHAPE 1	SHAPE 2	SHAPE 3
FORMULA			
PLUG IN VALUES			
AREA			
TOTAL SURFACE AREA			

TRIANGULAR PRISM

	SHAPE 1	SHAPE 2	SHAPE 3
FORMULA			
PLUG IN VALUES			
AREA			
TOTAL SURFACE AREA			

RECTANGULAR PYRAMID

	SHAPE 1	SHAPE 2	SHAPE 3
FORMULA			
PLUG IN VALUES			
AREA			
TOTAL SURFACE AREA			

CUBE

	SHAPE 1
FORMULA	
PLUG IN VALUES	
AREA	
TOTAL SURFACE AREA	