

Investigating Prisms

Name: _____

1. Take three minutes with the cubes. Put them together, show me your coolest creation.
2. Create a prism, write down its dimensions:

3. Build the first three prisms in the table below.
4. Fill in the blanks.
5. Try your own prisms, make sure you can double check your answer with your partner.
6. See if you can find short cuts (rather than straight counting).

Prism	Dimensions	Number of cubes	Number of outside squares
1	$1units \times 1units \times 1units$		
2	$1units \times 1units \times 2units$		
3	$1units \times 2units \times 3units$		
4	$2units \times 2units \times 3units$		
5			
6			
7			
8			
9			
10	$2units \times 3units \times 4units$		
11	$2units \times 2units \times 2units$		
12	$4units \times 3units \times 5units$		

Did you find any short cuts for determining the number of cubes? What was it?

Did you find any short cuts for determining the number of outside squares? What was it?

Try to solve these larger more difficult prisms. Can you make these with cubes?

(Grab a spare piece of paper for the work that you can put in with your notes)

Prism	Dimensions	Number of cubes necessary	Number of outside squares
1	$5\text{units} \times 5\text{units} \times 10\text{units}$		
2	$5\text{units} \times 6\text{units} \times 10\text{units}$		
3	$7\text{units} \times 7\text{units} \times 7\text{units}$		
4	$5\text{units} \times 10\text{units} \times 10\text{units}$		
5	$6\text{units} \times 9\text{units} \times 10\text{units}$		
6	$11\text{units} \times 12\text{units} \times 13\text{units}$		
7	$15\text{units} \times 20\text{units} \times 20\text{units}$		
8	$5\text{units} \times 30\text{units} \times 20\text{units}$		