

Grade 5 - Math



1st Marking Period

Finishing the House

What does



stand for?

Goal	<ul style="list-style-type: none">• Your task is ...• The goal is to...• The problem or challenge is to...• The obstacle to overcome is...
Role	<ul style="list-style-type: none">• You are...• You have been asked to...• Your job is...
Audience	<ul style="list-style-type: none">• Your client is...• Your target audience is...• You need to convince...
Situation	<ul style="list-style-type: none">• The context you find yourself in is...• The challenge involves dealing with...
Product, Performance and Purpose	<ul style="list-style-type: none">• You will create...in order to...• You need to develop ... so that...

G R A S P

Goal

A family in the local area needs to hire a construction company to put siding on their house. They need to know exactly how much the project will cost.

Role

Your business builds and repairs houses for families in need.

You have been asked to put siding on their house!

Your task is to **price out the job** and to **create an invoice (bill) for the service**.

Audience

The owners of the house are your customers. You need to tell them the exact cost of siding their house by calculating the square feet of siding needed and then communicate to them how much the job will cost.

Situation

The challenge is to measure the house very accurately to determine how much siding is needed. Remember, the house is a rectangular prism with doors and windows. The siding is sold in specific quantities.

Product, Performance and Purpose

You will create a final invoice showing all of your calculations and costs. You will present this invoice to the customer in hopes that they hire you for the job!

GRASP – Day 1



Siding are plastic sheets that cover the **surface of a house**. It is called “siding” because it covers the **sides of a house**. Siding does not cover doors and windows.



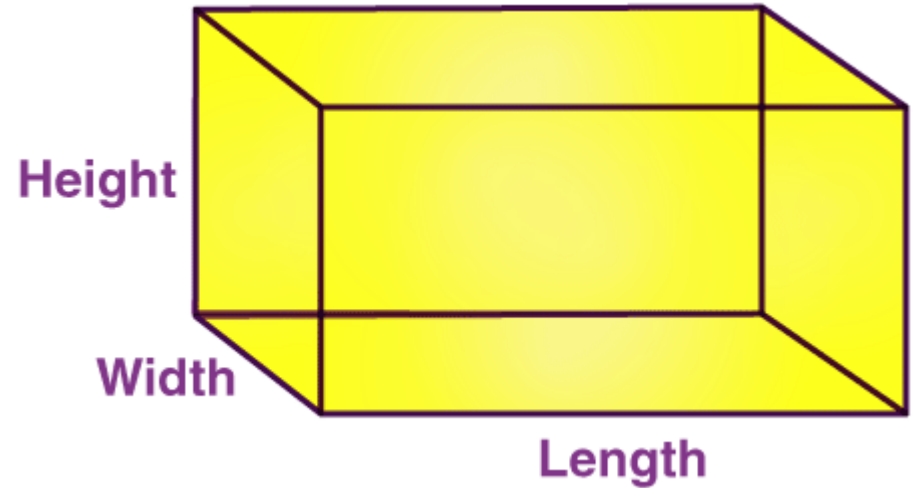
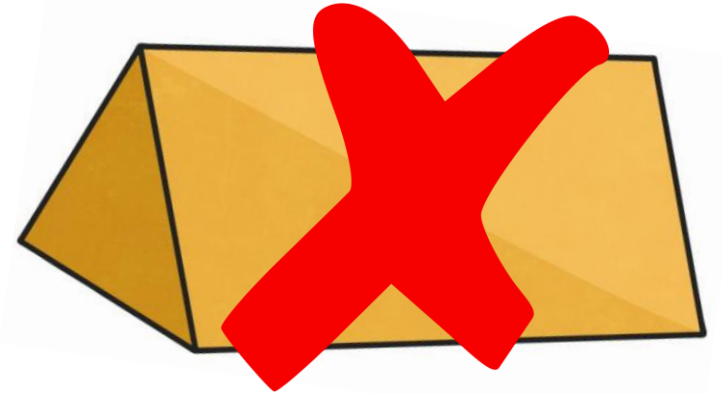
Let's review some geometric shapes.

The family's house has a shape of a **rectangular prism**. This is a 3-D shape with **length**, **width**, and **height**.

*What do you already know about rectangular prisms?
What objects in the classroom are the same shape?*

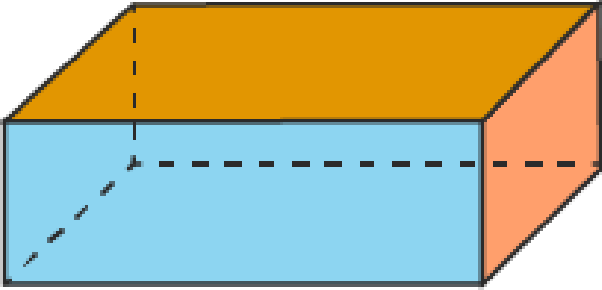
The roof of the house is a **triangular prism**. Do you think you would need to put siding on the roof?

What other parts on the house would not need to be sided?

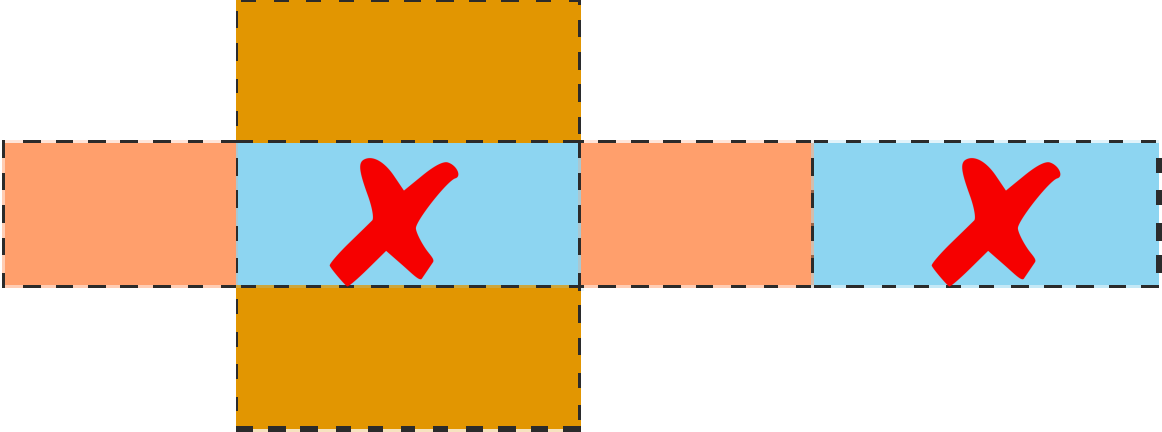


How many sides does a **rectangular prism** have?

Would all the sides need siding?



Rectangular Prism



Net of a Rectangular Prism

PART 1 – How much siding?

What do we need to know to determine how much siding the house will need?

The **base** of the house has dimensions that are 28 feet by 36 feet.

The siding will cover the outside walls of the house.

The **height** of the outside wall is 8 feet.

The outside of the house has **2 doors** and **8 windows**.

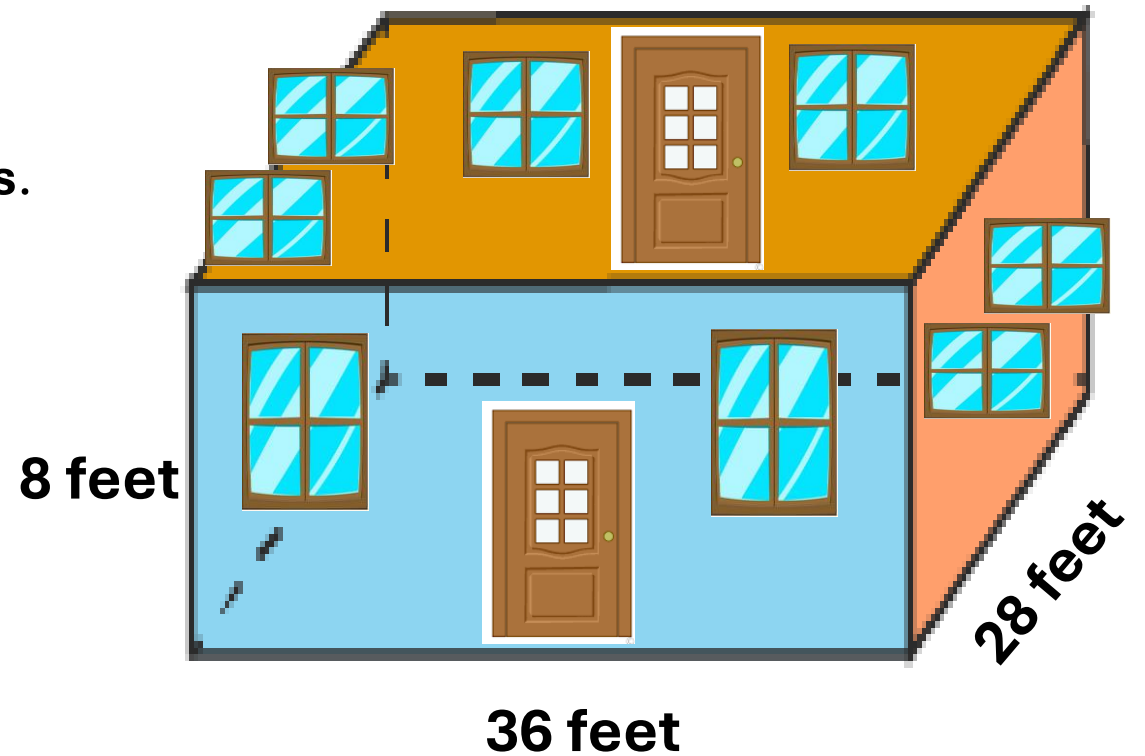
Each door has dimensions of 6 feet x 3 feet.

3 windows have dimensions 3 feet x 2 feet.

2 windows have dimensions 4 feet x 4 feet.

2 windows have dimensions 5 feet x 3 feet.

1 window has dimensions 1 foot x 3 feet.



PART 1 – How much siding?



With a partner, your **task today is to calculate how much siding is needed** (less the windows and doors) to cover the house.

Use graph paper to do your calculations. Show your work as it will be attached to your final project. Be sure your name is on all papers.

You may use rectangular prisms to discuss your calculations.

You may use calculators to check your work for accuracy.

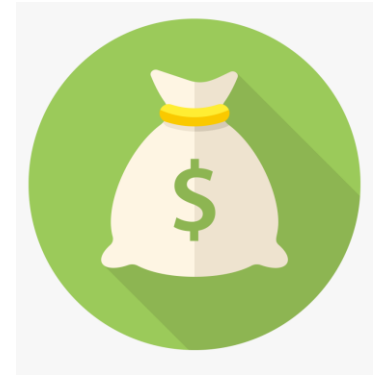
Grade 5 - Math



DAY 2

PART 2 – Materials and Cost

Yesterday, you and your partner calculated the total amount of surface area needed to side the house.



Today, you will work independently to determine the **cost to side the house**.

Each case of siding has a price of **\$157**.

Each case covers **200 square feet**.

Task: Determine how many cases of siding you need and how much it will cost to buy the siding for the entire house.



PART 3 – Final Invoice



Design your company heading and complete the invoice using information from Part 2.



Quantity of cases	Price per case	Cost
Subtotal		
Shipping Costs		\$75.00
GRAND TOTAL		

Look at the rubric – that is how you will be graded (Level 2).