**Algebra 1** **Investigative Task 1** Name_____

*Chapter 1*

The construction of a building requires the following for **each** floor:

5 tons of steel
4 tons of concrete
1 ton of drywall
1.5 tons of glass
.5 tons of carpet

1. How many tons of concrete are required for a building with 8 floors?

2. How many tons of carpet are required for a building with 22 floors?

3. How many total tons of ALL the building materials are required for an 9 story building?

The estimate provided for the building project specifies the following costs for materials:

Steel = $4,000 per ton
Concrete = $500 per ton
Drywall = $800 per ton
Glass = $9,000 per ton
Carpet = $600 per ton

4. Find the total cost to build one floor of a building.

5. Find the total cost for a building with 12 floors.

6. A developer plans to borrow $1,000,000 for a building with 20 floors. Will the developer have enough money?

7. An estimate was made based on the figures shown above for a building with 10 floors. The developer then upgrades many of the materials, raising the cost of the building to $800,000. What was the additional cost for the upgrades?