

## Building a House

**Ben the Builder is building a house for the Johnson family. He needs to use his math skills to build the house correctly.**

1. Ben added to find how many drywall screws he needs to complete the house. Then he subtracted the number of screws he has to find how many screws he needs to buy. He used his calculator to help him, but then he dropped it. Now the screen looks like this.

$$\begin{array}{r} 438 \square \\ + 2 \square 79 \\ \hline \square 1 \square 5 \\ - 3721 \\ \hline 3 \square 44 \end{array}$$

What are the missing numbers? How many screws does Ben need to buy? Explain your reasoning.

---

---

---

---

---

---

---

---

Name \_\_\_\_\_

**Beginning-of-Year  
Performance Task**

2. Ben will hire a crane to help the workers put the bundles of shingles on the roof. There is a limit to the weight the crane can lift at one time, but Ben wants the work done as quickly as possible. Explain to Ben what math he can use so that the crane uses the fewest lifts possible.

---

---

---

3. Ben needs to choose between three brands of shingles to use on the roof. He knows he needs 89 bundles of shingles, but each type of shingle weighs a different amount. He needs to take the information he has about the cost of the crane and the amount it can lift to determine the cost of using each brand.

The crane costs \$350 plus an additional \$150 for each hour or part of an hour the crane is used. The crane can make 4 lifts in one hour. Each lift must weigh 650 pounds or less. The weights of a bundle of each brand of shingle can be found in the table below.

Complete the table. Show your work. Then decide which brand of shingles Ben should choose. Explain your reasoning.

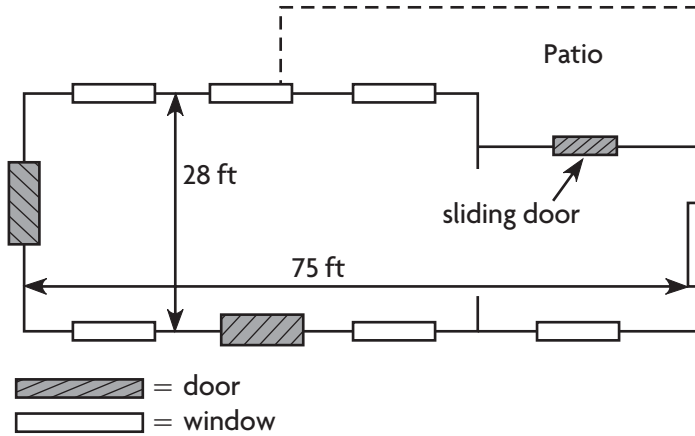
Shingle	Weight of each Bundle (lb)	Number of Bundles in One Lift	Number of Lifts Needed	Number of Hours Needed	Total Cost of the Crane
Brand A	75				
Brand B	80				
Brand C	85				



Name \_\_\_\_\_

**Beginning-of-Year  
Performance Task**

4. This is the floor plan of the house Ben is building.



What is the estimated area of the patio? Explain your reasoning.

A = \_\_\_\_\_

\_\_\_\_\_

\_\_\_\_\_

\_\_\_\_\_

\_\_\_\_\_

\_\_\_\_\_

\_\_\_\_\_

\_\_\_\_\_

**GO ON**

Name \_\_\_\_\_

**Beginning-of-Year  
Performance Task**

5. Ben needs to buy trim for around the windows and doors of the house. Complete the table to determine how much trim he should buy. Show your work.

Remember: Windows are trimmed on all four sides. Doors are not trimmed along the bottom.

Item	Number	Height (in.)	Width (in.)	Trim Needed (in.)
Window		48	40	
Door		80	36	
Sliding door		80	72	
			Total	

