

Balancing Act

Procedure

1. Record your data in the chart below.

Ruler Balance Point	Number of Notes on Left	Number of Notes on Right
15 cm		
18 cm		
21 cm		

- 2. Use Numbers** Count out two stacks of 25 self-stick notes. Place one stack on the left end of a metric ruler. Place the other stack on the right end of the ruler. Be sure the numbers on the ruler are face up.
- 3. Experiment** Make a loop of masking tape and press it onto the tip of a triangular wooden block. Balance the ruler on the tip of the block at the 15-cm mark. Record the number of self-stick notes on each end of the ruler.
- 4. Experiment** Reposition the ruler at the 18-cm mark. Place additional self-stick notes on the right end of the ruler until the ruler balances again. Record the number of self-stick notes on each end.
- 5. Experiment** Repeat step 4, but this time reposition the ruler at the 21-cm mark.

Conclusion

Write the answers to the questions below.

1. **Analyze Data** As you moved the ruler farther to the right, how did it affect the number of self-stick notes you needed to balance the ruler?

2. **Predict** Predict how you could balance the ruler if you repositioned it so that the 10-cm mark was over the tip of the block.

Investigate More!

Solve a Problem A construction crane has an arm balanced on a tower. In the space below, draw a diagram to show where you would attach the weight and place the arm of the crane to most easily lift a heavy object.