



First Name: _____ Last Name: _____

Grade: _____ Teacher: _____ Parent's email: _____

Units of Length

This challenge contains practical problems focusing on units of measurement. You need to know not only how to analyze data but also how to perform some of the common unit conversions. Students, feel free to discuss with your parents about converting inches to feet or the reverse. In addition, it's helpful to organize your thoughts into a table or a list.

Turn your answers in by **March 17, 2016**.

Kinder & First Grade: Solve at least 2 problems.

Second & Third Grade: Solve at least 5 problems.

Fourth & Fifth Grade: Solve at least 9 problems.

Use the following information to answer problems 1 to 5.

Cory is making strings of beads for necklaces and bracelets.

- The string of red beads is 1 foot long.
- The string of blue beads is 3 inches longer than the string of red beads.
- The string of yellow beads is 9 inches shorter than the string of red beads.
- The string of green beads is 2 inches longer than the string of yellow beads.

String A



String B



String C



String D



1. Based on the clue and the picture, what is the color of each string of beads?

Answer:

A	B	C	D

2. In inches, how long is each string of beads?

Answer:

Red	Blue	Green	Yellow

3. If Cory connects all four strings seamlessly to make one long string, how long in inches will this string be?

Answer: _____

4. If there are 3 beads for every inch of string, how many beads will Cory need to complete **all** his strings?

Answer: _____

5. The red and blue beads cost 10 cents each. The yellow and green beads cost 5 cents each. How much will it cost to make each string?

Answer:

Red	Blue	Green	Yellow

Use the following information to answer problems 6 to 8.

Drew, Erin, Jamal, Kendra, Parker, and Sandy have lined up according to height so they can be placed on-stage for the spring concert. The shortest person is at the front of the line.

- Drew is directly behind Kendra.
- Erin is right behind Parker.
- Jamal is between Parker and Drew.
- Sandy is one inch shorter than Kendra.
- Kendra is second in line.

Students' Heights

- 3 feet 11 inches
- 46 inches
- 4 feet 8 inches
- 48 inches
- 4 feet 2 inches
- 52 inches

Hint: Making an organized chart will help you to find answers for problems 6 to 8.

6. What is each person's height in feet and inches?

Answer:

Name:						
Height:						

7. Using the clues above, in what order are they standing in line?

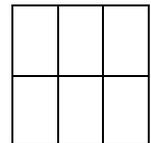
Answer:

	shortest →			← tallest		
Name:						

8. What is the average height, in inches, of the students? Round your answer to the nearest whole number.

Answer: _____

9. A square garden has an area of 144 square inches. Suppose the garden is partitioned into six equal rectangles as shown at the right. How many inches is the perimeter of one of the six rectangles?

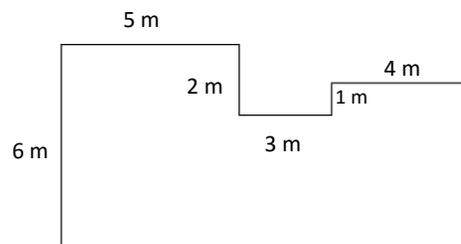


Answer: _____

10. Rajas is less than 6 feet tall but more than 2 feet tall. His height in inches is a multiple of 7 and is also 2 inches more than a multiple of 6. What is Rajas' height in inches?

Answer: _____

11. In the figure on the right, all corner angles are right angles. How many square meters of area does the figure have?



Answer: _____