## Lesson 15: Length Measurements

* Let’s solve problems about distances and lengths.

### Warm-up: Which One Doesn’t Belong: Measurements

Which one doesn’t belong?

1. 3 feet
2. $\left(3×1\right)$ yards
3. $\left(2×18\right)$ inches
4. $\left(\frac{1}{3}+\frac{1}{3}+\frac{1}{3}\right)$ yard

### 15.1: Frisbee Throws

Six students were throwing frisbees on field day. Here is some information about each person’s first throw.

|  student  | distance |
| --- | --- |
| Han  | 17 yards |
| Lin  | $51\frac{1}{2}$ feet |
| Clare  | $21\frac{1}{3}$ feet  |
| Andre | 22 yards 2 feet |
| Elena |  |
| Tyler |  |

* Elena’s frisbee went 3 times as far as Clare’s did.
* Andre’s frisbee went 4 times as far as Tyler’s did.



1. Complete the table with Elena and Tyler’s distances. Explain or show your reasoning.
2. Who are the top 3 throwers for that round?
* Find out by listing the students and their distances in feet and in order, from longest to shortest.

| * rank
 | * student
 | * distance (feet)
 |
| --- | --- | --- |
| * 1
 |  |  |
| * 2
 |  |  |
| * 3
 |  |  |
| * 4
 |  |  |
| * 5
 |  |  |
| * 6
 |  |  |

### 15.2: Stone Towers

While on an outing, a group of friends had a stone-stacking contest to see who could build the tallest stone tower.



* Andre’s stone tower is 3 times as tall as Diego’s, but Diego didn’t build the shortest tower.
* The tallest tower is 4 feet and 2 inches tall and belongs to Tyler.
* One person built a tower that is 39 inches tall.
* Tyler’s tower is 5 times as tall as the shortest tower.
1. How tall is each person’s stone tower? Be prepared to explain or show your reasoning.

| * person
 | * tower height (inches)
 |
| --- | --- |
| * Andre
 |  |
| * Tyler
 |  |
| * Clare
 |  |
| * Diego
 |  |

1. Elena came along and built a tower that is 5 times as tall as Diego’s tower. Is Elena’s tower more than 6 feet? Show your reasoning.



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