Unit 6, Lesson 3

Metric Conversion and Multiplication by Powers of 10

Let's notice patterns in metric measurements.

Warm-up

Number Talk: Multiply Then Divide

Find the value of each expression mentally.

- 100×1.5
- $1{,}000 \times 1.5$
- $15 \div 10$
- $15 \div 100$

Activity 1

How Tall? How Long? How Far?



1. Complete the table.

meters	centimeters	millimeters
1		
10		
10^2		

2. What patterns do you notice in the table?

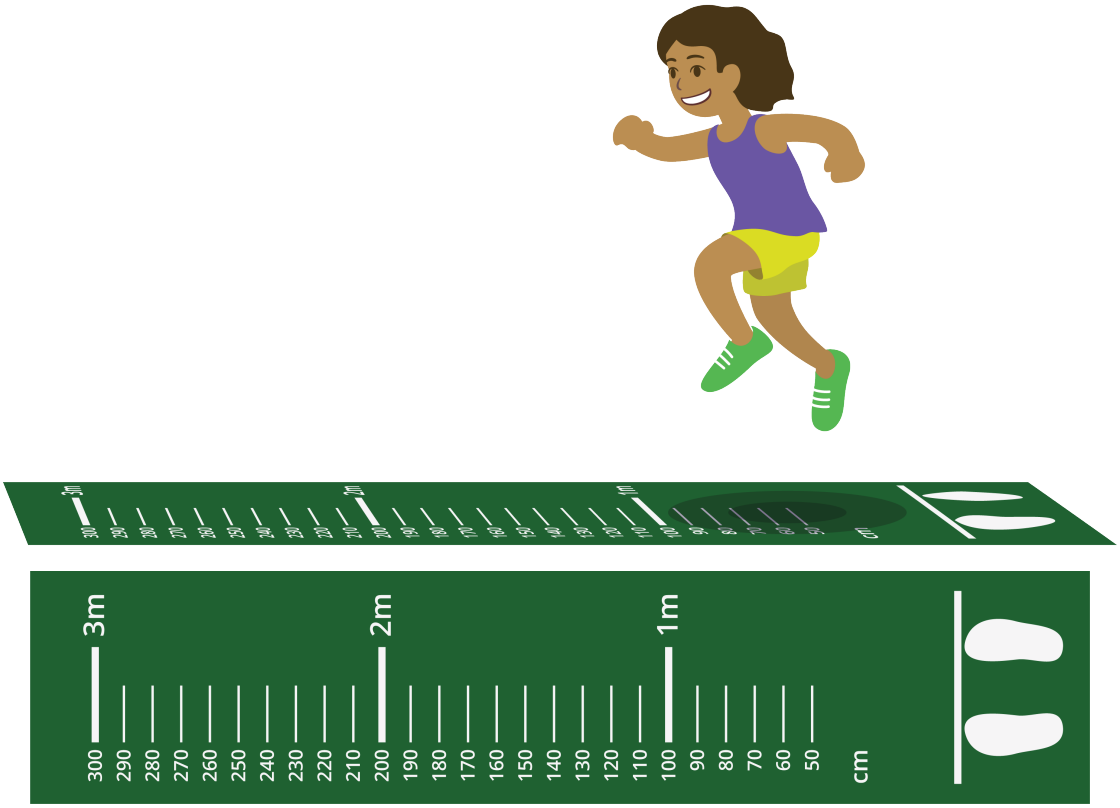
3. There are 3 long-distance races: 10 kilometers, 100 kilometers, and 1,000 kilometers. Complete the table to show these distances in meters.

distance in kilometers	distance in meters
1	1,000
10	
100	
10^3	

4. What patterns do you notice in the table?

Activity 2

Broad Jump



Here are the distances that each student jumped in the standing broad jump.

student	distance
Mai	1.61 meters
Elena	1.43 meters
Clare	1.57 meters

1. The average distance for 5th graders is 148 centimeters. Is each student in the table below, at, or above the average distance? Explain or show your reasoning.

2. Elena says her jump sounds more impressive if she reports it in millimeters.

   a. How far is Elena's jump in millimeters? What about Mai's and Clare's jumps?

   b. Which unit do you think is best for reporting the jumps? Explain your reasoning.