

Name: _____

Date: _____

UNIT 1 • RELATIONSHIPS BETWEEN QUANTITIES AND EXPRESSIONS

Lesson 2: Units of Measure

Practice 1.2.1: Converting Units

B

For problems 1–3, convert the units as directed.

1. Earth completes its 584-million-mile orbit of the sun in about 365 days. How fast is Earth moving through its orbit in miles per hour?
2. Convert 42 square yards to square feet.
3. Desmond and Molly each purchased 5 boxes of tangerines, and each box contains 60 tangerines. How many tangerines do they have in total?

Use the information in the following table to solve problems 4–7.

U.S. customary	1 inch	1 gallon	1 pound
Metric	2.54 centimeters	3.79 liters	454 grams

4. Joseph grew 2 centimeters in 12 weeks. How much is this in inches per year?
5. A Siberian tiger can grow to 350 centimeters long, excluding the tail. How long is this in feet?
6. The average Mallard duck weighs about 1 kilogram. The average English citizen weighs about 170 pounds. How many ducks would it take to outweigh a single English person? Round your answer up to the nearest whole number.
7. Mt. Denali in Alaska measures about 5,500 meters from its base to its highest peak. How high is this in feet? Round your answer to the nearest thousand.

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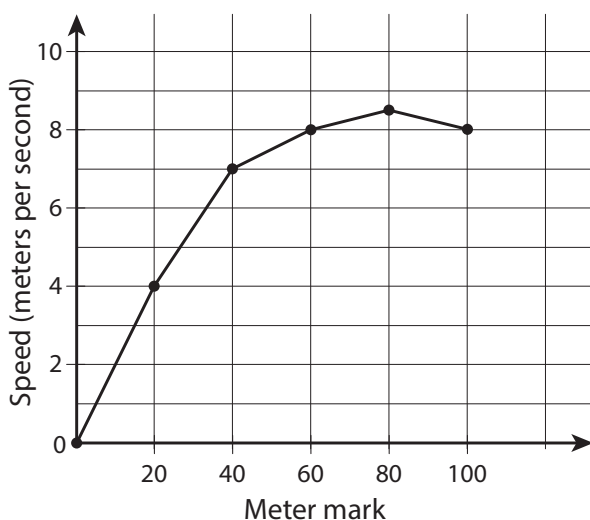
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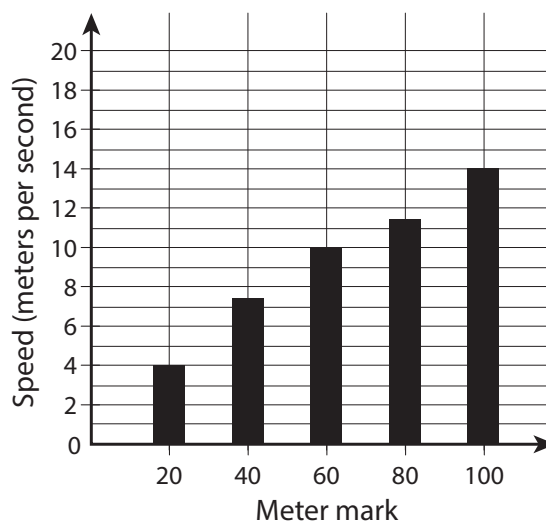
Use the given information to solve problems 8–10.

The track team is gathering data about its runners. All runners have been separated into 2 groups. The members of Group 1 recorded the time it took to run each of the 20-meter segments and converted the measurements to speed. The members of Group 2 used a timer to record each runner's total time every 20 meters. The following graphs show the average data for each group.

Group 1



Group 2



8. What was the average time it took for runners in Group 1 to run the first 20 meters?
9. On average, how long did it take for runners in Group 2 to run the last 20 meters?
10. On average, how fast were the runners in Group 2 over the last 20 meters? How does this compare to the average speed of runners in Group 1 at the 100-meter mark?