Mr. Tu's Excellent Examples

Module 11
Triathlete

Applying Lesson 11.1

1. A bicyclist rides for two hours each day to train for a race. What customary unit of measure is appropriate for stating the approximate distance traveled in those two hours?

Miles

2. If that same cyclist wanted to use a metric unit of measure to describe the distance traveled, what metric unit would be reasonable to use?

Kilometers

3. Athletes training for a competition record their weight at the end of each week. What customary unit of measurement would they use? What metric unit of measurement would they use?

Pounds; Kilograms

Applying Lesson 11.2

1. A runner is being timed in the 40-yard dash. Express the distance of that sprint in feet.

40 x 3 = 120 feet
The distance of the sprint is 120 feet.

2. A coach has 15 athletes on her squad. She instructs the trainer to have at least two quarts of water available for each athlete at practice. The trainer fills two five-gallon containers with water. Did the trainer comply with the coach's request?

15 x 2 quarts = 30 quarts needed
2 x 5 gallons = 10 gallons
10 gallons = 40 quarts of water
40 quarts > 30 quarts
Yes, the trainer complied with the coach's request.

3. The race officials for a cycling race want every cyclist to receive 400 milliliters of water at the halfway point of the race. If there are 40 cyclists, how many liters of water will be needed to provide each cyclist with 400 milliliters?

40 x 400 ml = 16,000 ml
16,000 ml = l6 liters
They will need to provide 16 liters of water.

4. Roger Bannister was the first distance runner to run a mile in less than four minutes in official competition. This means he ran the mile in fewer than what number of seconds?

4 x 60 = 240 seconds
Roger Bannister ran the mile in less than 240 seconds.

Applying Lesson 11.3

1. The fastest runner in the Men's Category of the 2006 Boston Marathon ran the 26 mile, 385 yard race in 2 hours, 7 minutes. The race began at 12:02 p.m. What time did he cross the finish line?

He crossed the finish line at 2:09 p.m.

2. The women runners began the 2006 Boston Marathon at 11:31 a.m. The winner crossed the finish line at 1:54 p.m. How long did it take the winner to complete the race?

The winner completed the race in 2 hours, 23 minutes.

3. The closing ceremony of the 2004 Olympic Games was held on August 29, 2004. The closing ceremony was held 16 days after the opening ceremony. What was the date of the opening ceremony?

The opening ceremony for the 2004 Olympic Games was on August 13, 2004.

Applying Lesson 11.4

1. The frame height of a bike is measured from the center of the crank to the top of the frame. To determine the seat height, you must add the length of the crank, the frame height, and the height of the seat above the frame. What is the seat height of a bike with a one-foot, three-inch frame, a six-inch crank length, and a seat adjusted to be eight inches above the frame?

The seat height of the bike is 2 feet, 5 inches or 29 inches.

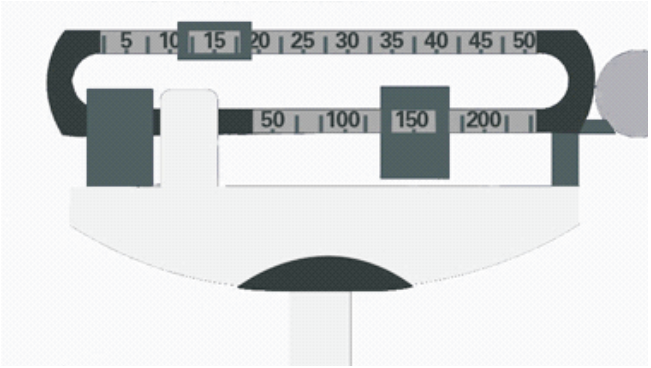
2. A runner is preparing for a 5k race (five kilometers). The runner is doing interval training in preparation for the race by running twelve 400-meter runs each day and resting between each run. Will the race length be greater than the total distance covered each day in the interval training?

12 x 400 meters = 4,800 meters
4,800 meters = 4.8 kilometers
4.8 kilometers < 5 kilometers

The race length will be greater than the distance covered each day in interval training.

Applying Lesson 11.5

1. A high school wrestler wants to qualify to wrestle in the 155-160 pound weight class. The scale below shows his weight. Does he qualify? Explain why or why not?



The scale shows a weight of 165 pounds. The wrestler is 5 pounds over the limit for that weight class.

2. A university student is training for the Olympics. She wants to wrestle in the 66 kg (kilogram) weight class. She currently weighs 63,400 g. Is her weight above or below the weight limit? How many kilograms is her current weight above or below the limit?

63,400 g = 63.4 kg
63.4 kg < 66 kg

The student's weight is below the weight limit by 2.6 kilograms.