

LESSON
2

Measurement and Geometry

Practice B: Converting Metric Units

Convert.

1. A large thermos holds about 1.5 liters. 1.5 L = mL
2. A computer screen is about 30.75 cm wide. 30.75 cm = mm
3. A beetle has a mass of about 0.68 g. 0.68 g = mg
4. The distance from Dallas to Denver is 1,260 km. 1,260 km = m
5. 50 cm = mm
6. 3.6 L = mL
7. 6.5 kg = g
8. 0.9 km = m
9. 1.42 m = cm
10. 12.85 mL = L

Compare. Use <, >, or =.

11. 500 millimeters 50 centimeters
12. 6.2 liters 620 milliliters
13. 8.3 kilograms 8,300 grams
14. 2.6 meters 26,000 centimeters
15. An official hockey puck can have a mass of no more than 170 grams. What is the puck's maximum mass in kilograms?
16. An official hockey puck is 2.54 centimeters thick. What is the official thickness of a hockey puck in millimeters?
17. An official hockey goal is 1.83 meters tall. What is the height of a hockey goal in centimeters?
18. Hockey pucks can be hit at speeds of up to 190 kilometers per hour! How many meters per hour is that?

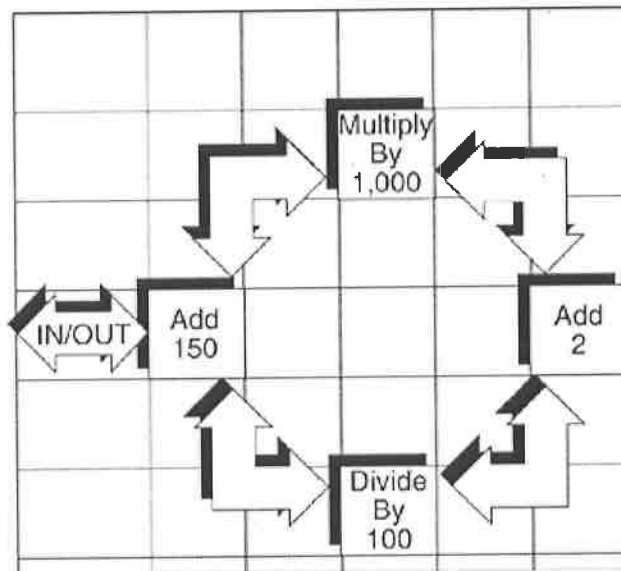
LESSON 2 Measurement and Geometry
Puzzles, Twisters & Teasers: The Incredible Machine

Dr. Rubix created an interesting new metric computing machine that takes a length as input, performs several operations, then outputs a new length. Below is a diagram of what the machine does. The doctor would like you to test the machine.

Here's how it works: Looking at the first table below, we see that the length we want to operate on is 1.0 m, the direction we will move through the diagram in is clockwise, and that the length must be processed 2 times. So, using the diagram, we will put 1 m in, add 150, multiply by 1,000, add 2, and divide by 100. We've now processed the length one time. Since we want to process the length twice, we will perform all the same operations a second time. When we do, we get 16,750.22 m as shown in the second table below. Following this example, fill in the Output column of the second table.

Length	Direction	Times
1.0 m	Clockwise	2
0.00001 m	Counter-Clock	2
60.002 m	Clockwise	1
1,200.0 m	Clockwise	1
5.0 m	Counter-Clock	2

Input	Output
1.0 m	16,750.22 m
0.00001 m	
60.002 m	
1,200.0 m	
5.0 m	



Each output is assigned a letter in the table below. Unscramble these letters to answer the riddle.

2,250.04 m	N
39,150 m	S
16,750.22 m	P
2,100.04 m	L
38,650.001 m	A
3,700 m	R
13,650.02 m	T

What's the difference between a well-dressed man and a tired dog?

One wears a suit and the other just

_____ !