

The Solar System

Distance in space can be measured in astronomical units, or AU. This is the average distance of the Earth from the Sun.

1 Astronomical Unit = 149,597,871 kilometers



1. Write these numbers in decimal form:

Decimal form:

$(9 \times 1) + (5 \times 1/10) + (8 \times 1/100)$	
one and fifty-two hundredths	
one	
$(5 \times 1) + (2 \times 1/10)$	
0.387	
19.2	
$(7 \times 1/10) + (2 \times 1/100) + (2 \times 1/1,000)$	
thirty and one tenth	

In the next table, the planets are listed in order from the closest to the sun to the farthest from the sun. Put the decimals from above in the table in order from smallest to largest:

Planet	Average Distance from Sun in AU
Mercury	
Venus	
Earth	1.0
Mars	
Jupiter	
Saturn	
Uranus	
Neptune	

2. Mercury, Venus, Earth, and Mars are called the terrestrial planets because their surfaces are rock. Create a number line to show their distance from the sun.

3. The Jovian Planets are Jupiter, Saturn, Uranus, and Neptune. They are gaseous and *huge* compared to the terrestrial planets. **Create a new number line to show their distance from the sun.** Is Saturn or Jupiter closer to the sun?

4. Compare the number lines from number 2 and 3. What do you notice? How many times as far from the sun is Saturn as Earth?

5. The asteroid belt separates the terrestrial planets and the Jovian planets. In astronomical units, how far could the asteroid belt be from the sun? Explain your thinking using words, pictures, and numbers.

Mental Math Mania!

Astronauts, engineers, scientists and budget analysts at NASA need to know their numbers. Test your skills with this math square.

Instructions:

1. Fill in the missing numbers to complete the math square.
2. Use the numbers 1 through 9 to complete the equations.
3. Each number is used only once.
4. Each row is a math equation. So is each column.
5. Three numbers are done for you.

	x	9	-		5
+		+		x	
	-		/	2	2
+		+		/	
7	x		-		13
13		18		1	

Hint: Remember that multiplication and division are performed before addition and subtraction.

(Solution on page 36)