STANDARD INDEX FORM 1

1. Write the following numbers in standard form:

Decimal	Standard form
0.00528	
187.05805	
- 90.396	
0.00057	
24469000000	

2. Write the following numbers in decimal notation:

Decimal	Standard form
	6.503×10^{6}
	8.17×10^{-5}
	-1.185×10^{7}
	3.276×10^{-3}
	5.6071×10^{12}

3. Complete the following grid:

	Decimal	Standard form
47.52×10^{6}		
-16.0002×10^{8}		
0.0023×10^{10}		
$5\ 310.7 \times 10^{-10}$		
57×10^{-5}		
0.542×10^{-4}		

3. Our galaxy weighs about 2.2×10^{41} kg, and the sun weighs about 1.989×10^{30} kg. How many suns are necessary to weigh as much as our galaxy? Write your result in standard form.

SOLUTION

1. Write the following numbers in standard form:

Decimal	Standard form
0.00528	5.28×10^{-3}
187.05805	1.8706×10^{2}
- 90.396	-9.0396×10
0.00057	5.7×10^{-4}
24469000000	2.4469×10^{10}

2. Write the following numbers in decimal notation:

Decimal	Standard form
6503000	6.503×10^{6}
0.0000817	8.17×10^{-5}
-11850000	-1.185×10^{7}
0.003276	3.276×10^{-3}
5607100000000	5.6071×10^{12}

3. Complete the following grid:

	Decimal	Standard form
47.52×10^{6}	47520000	4.752×10^{7}
-16.0002×10^{8}	-1600020000	-1.60002×10^{9}
0.0023×10^{10}	23000000	2.3×10^{7}
$5\ 310.7\times10^{-10}$	0.00000053107	5.3107×10^{-7}
57×10^{-5}	0.00057	5.7×10^{-4}
0.542×10^{-4}	0.0000542	5.42×10^{-5}

4. Our galaxy weighs about 2.2×10^{41} kg, and the sun weighs about 1.989×10^{30} kg. How many suns are necessary to weigh as much as our galaxy? Write your result in standard form.

$2.2\times10^{41}\div1.989\times10^{30}=(2.2\div1.989)\times10^{11}=1.106\times10^{11}$ suns