

Learning Goal 2.4	I can convert number between standard form and scientific notation.
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1. Write each number in scientific notation.

Developing			
a. 0.000 054 mg	b. 0.006 4 s	c. 0.000 32 mm	d. 0.012 345 mg
e. 0.000 000 000 1 mL	f. 0.987 mg	g. 1 500 g	h. 123 456 km
i. 120 km	j. 975.05 km	k. 900 hours	l. 6.7 m
Proficient			
m. 1 one thousandth of a second	n. 12 million km	o. 17 hundredths of a mm	p. 7.9 mL
q. 3.7 million kg	r. 187 thousand years	s. 8.2 g	t. 15 hundred L
Extending			
u. 0.00035×10^{-4} mL	v. 23×10^{-8} mm	w. 8×10^{-17} mg	x. 0.00678×10^{-6} s
y. 5×10^{16} L	z. $123\,456 \times 10^{27}$ kg	aa. 38×10^2 m	bb. 495.8×10^6 km

b. 0.0064 s
 $= 6.4 \times 10^{-3} \text{ s}$

k. 900 hours
 $= 9 \times 10^2 \text{ hours}$

o. $17 \text{ hundredths of a mm}$
 $= 0.17 \text{ mm}$
 $= 1.7 \times 10^{-1} \text{ mm}$

g. 3.7 million kg
 $= 3\,700\,000 \text{ kg}$
 $= 3.7 \times 10^6 \text{ kg}$

v. $23 \times 10^{-8} \text{ mm}$
6 more
 $= 0.000\,000\,23 \text{ mm}$
 $= 2.3 \times 10^{-7} \text{ mm}$

z. $123\,456 \times 10^{27} \text{ kg}$
27 zeros
 $= 1.234\,56 \times 10^{32} \text{ kg}$

2. Write each number in standard notation. Make note of which questions are written in scientific notation.

Developing			
a. 1.5×10^{-2} s	b. 7.75×10^{-1} mg	c. 1.71×10^{-8} mm	d. 9.24×10^{-4} mL
e. 4.65×10^{-3} g	f. 3.14×10^{-5} mm	g. 2.5×10^1 kg	h. 3.14×10^5 km
i. 5.4×10^6 kg	j. 2.71×10^3 hours	k. 7.5×10^6 L	l. 5.234×10^2 kg
Proficient			
m. 4.32×10^0 s	n. 9.75×10^0 m	o. 4.63×10^0 g	p. 3.14×10^0 L

Extending			
q. $495.3 \times 10^{-2} \text{ s}$	r. $0.0934 \times 10^{-3} \text{ mg}$	s. $0.0067 \times 10^{-5} \text{ mL}$	t. $0.54 \times 10^{-7} \text{ mm}$
u. $31415 \times 10^5 \text{ kg}$	v. $0.00035 \times 10^8 \text{ L}$	w. $234 \times 10^3 \text{ hours}$	x. $75 \times 10^4 \text{ km}$

b. $7.75 \times 10^{-1} \text{ mg}$
 $= 0.775 \text{ mg}$

k. $7.5 \times 10^6 \text{ L}$
 $= 7500000 \text{ L}$

p. $3.14 \times 10^0 \text{ L}$
 $= 3.14 \text{ L}$

v. $0.00035 \times 10^8 \text{ L}$
 $= 35000 \text{ L}$

$8-5=3$

