

Name: \_\_\_\_\_

Date: \_\_\_\_\_

**Math 9 Section 2.2 Powers of Tens and Zeros**

1. Evaluate the following without a calculator:

a) $10^2$ 100,000	b) $-7^0$ -1	c) $10^{-3}$ 0.001, $\frac{1}{1000}$	d) $10^2$ 100
e) $100^2$ 10000	f) $(1+99)^0 - 4$ -3	g) $-4 - (22 \times 4)^0$ -5	h) $(10^0 - 5)^0$ 1
i) $10^2 - 5^0 \times (-2)$ $100 - 1 \times (-2)$ $100 - (-2) = 102$	j) $10^{-3} \times 10^3$ $\frac{1}{1000} \times 1000 = 1$ $\frac{1}{10} = \frac{1}{10}$	k) $12 \times 3^2 + 1999^0$ $12 \times 9 + 1$ 109	l) $3 \times 10^3 + 2 \times 10^2$ 3200

2. Write each of the following as a power of 10:

a) 945 $= 9 \times 10^2 + 4 \times 10^1 + 5 \times 10^0$	b) 12,391 $1 \times 10^4 + 2 \times 10^3 + 3 \times 10^2 + 9 \times 10^1 + 1$	c) 9385 $9 \times 10^3 + 3 \times 10^2 + 8 \times 10^1 + 5$
d) 12,035 $1 \times 10^4 + 2 \times 10^3 + 3 \times 10^1 + 5$	e) 1,003,840 $1 \times 10^6 + 3 \times 10^3 + 8 \times 10^2 + 4 \times 10^1$	f) 30,003,152 $3 \times 10^7 + 3 \times 10^3 + 1 \times 10^2 + 5 \times 10^1 + 2$

3. Write each of the following in standard form:

a) $9 \times 10^3 + 8 \times 10^2 + 7 \times 10 + 3$ 98073	b) $8 \times 10^5 + 2 \times 10^3 + 8 \times 10^2 + 1$ 802801	c) $7 \times 10^7 + 6 \times 10^5 + 3 \times 10^2 + 1$ 70600301
d) $5 \times 10^5 + 6 \times 10^4 + 9 \times 10^3 + 2 \times 10$ 569020	e) $1 \times 10^7 + 2 \times 10^5 + 9 \times 10^3 + 5$ 209105	f) $5 \times 10^8 + 1 \times 10^6 + 9 \times 100 + 1$ 150000901



$$2x+2 = 11$$

$$2x = 9$$

$$x = 4.5$$