

*Related calculations to keep the same result*

$$\begin{array}{rcl} 60 \times 20 & = & 1200 \\ \times 10 \quad \downarrow & & \downarrow \div 10 \\ 600 \times 2 & = & 1200 \end{array}$$

$$\begin{array}{rcl} 60 \div 20 & = & 3 \\ \div 10 \quad \downarrow & & \downarrow \div 10 \\ 6 \div 2 & = & 3 \end{array}$$

*Index Laws*

$$\frac{1}{10^6} = 10^{-6}$$

$$10^5 \times 10 = 10^6$$

*Convert each calculation into standard form*

### *Section 1*

$$32 \times 10^7$$

$$3.2 \div 10^7$$

$$320 \times 10^7$$

$$32 \div 10^7$$

$$0.32 \times 10^7$$

$$0.32 \div 10^7$$

### *Section 2*

$$860 \times 10^6$$

$$0.07 \div 10^3$$

$$41 \div 10^3$$

$$0.88 \times 10^7$$

$$96 \times 10^9$$

$$4.1 \div 10^3$$

$$702 \times 10^4$$

$$0.028 \div 10^9$$

$$62.9 \div 10^2$$

$$0.07 \times 10^1$$

$$92.02 \times 10^{-4}$$

$$5.01 \div 10^{-6}$$

$$739.03 \times 10^6$$

$$0.109 \div 10^5$$

$$90.8 \div 10^{-2}$$

$$0.19 \times 10^3$$

$$21 \times 10^{-1}$$

$$34.03 \div 10^{-2}$$

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*Index Laws*

$$\frac{1}{10^6} = 10^{-6}$$

$$10^5 \times 10 = 10^6$$

*Convert each calculation into standard form*

### Section 1

$$32 \times 10^7 = 3.2 \times 10^8$$

$$3.2 \div 10^7 = 3.2 \times 10^{-7}$$

$$320 \times 10^7 = 3.2 \times 10^9$$

$$32 \div 10^7 = 3.2 \times 10^{-6}$$

$$0.32 \times 10^7 = 3.2 \times 10^6$$

$$0.32 \div 10^7 = 3.2 \times 10^{-8}$$

### Section 2

$$860 \times 10^6 = 8.6 \times 10^8$$

$$0.07 \div 10^3 = 7 \times 10^{-4}$$

$$41 \div 10^3 = 4.1 \times 10^{-4}$$

$$0.88 \times 10^7 = 8.8 \times 10^6$$

$$96 \times 10^9 = 9.6 \times 10^{10}$$

$$4.1 \div 10^3 = 4.1 \times 10^{-3}$$

$$702 \times 10^4 = 7.02 \times 10^6$$

$$0.028 \div 10^9 = 2.8 \times 10^{-11}$$

$$62.9 \div 10^2 = 6.29 \times 10^{-1}$$

$$0.07 \times 10^1 = 7 \times 10^{-1}$$

$$92.02 \times 10^{-4} = 9.202 \times 10^{-3}$$

$$5.01 \div 10^{-6} = 5.01 \times 10^6$$

$$739.03 \times 10^6 = 7.3903 \times 10^8$$

$$0.109 \div 10^5 = 1.09 \times 10^{-6}$$

$$90.8 \div 10^{-2} = 9.08 \times 10^3$$

$$0.19 \times 10^3 = 1.9 \times 10^2$$

$$21 \times 10^{-1} = 2.1 \times 10^0$$

$$34.03 \div 10^{-2} = 3.403 \times 10^{-1}$$