



Finding Relative Value with Powers of Ten

Name: _____

Solve each problem. Answer as a decimal (if necessary).

Answers

1) 5×10^4 is _____ \times the value of 3×10^7

1. _____

2) 3×10^2 is _____ \times the value of 8×10^5

2. _____

3) 8×10^6 is _____ \times the value of 3×10^9

3. _____

4) 8×10^9 is _____ \times the value of 3×10^4

4. _____

5) 6×10^7 is _____ \times the value of 8×10^4

5. _____

6) 5×10^9 is _____ \times the value of 7×10^7

6. _____

7) 7×10^3 is _____ \times the value of 6×10^8

7. _____

8) 8×10^2 is _____ \times the value of 4×10^4

8. _____

9) 9×10^3 is _____ \times the value of 3×10^6

9. _____



Finding Relative Value with Powers of Ten

Name: **Answer Key**

Solve each problem. Answer as a decimal (if necessary).

1) 5×10^4 is _____ \times the value of 3×10^7

$$\frac{5 \times 10^4}{3 \times 10^7} = \frac{5}{3} \times \frac{10^4}{10^7} = \frac{5}{3} \times 10^{-3} = 1.667 \times 10^{-3}$$

2) 3×10^2 is _____ \times the value of 8×10^5

$$\frac{3 \times 10^2}{8 \times 10^5} = \frac{3}{8} \times \frac{10^2}{10^5} = \frac{3}{8} \times 10^{-3} = 0.375 \times 10^{-3}$$

3) 8×10^6 is _____ \times the value of 3×10^9

$$\frac{8 \times 10^6}{3 \times 10^9} = \frac{8}{3} \times \frac{10^6}{10^9} = \frac{8}{3} \times 10^{-3} = 2.667 \times 10^{-3}$$

4) 8×10^9 is _____ \times the value of 3×10^4

$$\frac{8 \times 10^9}{3 \times 10^4} = \frac{8}{3} \times \frac{10^9}{10^4} = \frac{8}{3} \times 10^5 = 2.667 \times 10^5$$

5) 6×10^7 is _____ \times the value of 8×10^4

$$\frac{6 \times 10^7}{8 \times 10^4} = \frac{6}{8} \times \frac{10^7}{10^4} = \frac{3}{4} \times 10^3 = 0.75 \times 10^3$$

6) 5×10^9 is _____ \times the value of 7×10^7

$$\frac{5 \times 10^9}{7 \times 10^7} = \frac{5}{7} \times \frac{10^9}{10^7} = \frac{5}{7} \times 10^2 = 0.714 \times 10^2$$

7) 7×10^3 is _____ \times the value of 6×10^8

$$\frac{7 \times 10^3}{6 \times 10^8} = \frac{7}{6} \times \frac{10^3}{10^8} = \frac{7}{6} \times 10^{-5} = 1.167 \times 10^{-5}$$

8) 8×10^2 is _____ \times the value of 4×10^4

$$\frac{8 \times 10^2}{4 \times 10^4} = \frac{8}{4} \times \frac{10^2}{10^4} = \frac{2}{1} \times 10^{-2} = 2 \times 10^{-2}$$

9) 9×10^3 is _____ \times the value of 3×10^6

$$\frac{9 \times 10^3}{3 \times 10^6} = \frac{9}{3} \times \frac{10^3}{10^6} = \frac{3}{1} \times 10^{-3} = 3 \times 10^{-3}$$

Answers

1. **0.001667**

2. **0.000375**

3. **0.002667**

4. **266,700**

5. **750**

6. **71.4**

7. **0.00001167**

8. **0.02**

9. **0.003**