



Finding Relative Value with Powers of Ten

Name: _____

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

Answers

1) 5×10^8 is _____ \times the value of 7×10^6

1. _____

2) 9×10^8 is _____ \times the value of 5×10^3

2. _____

3) 8×10^7 is _____ \times the value of 9×10^8

3. _____

4) 5×10^5 is _____ \times the value of 2×10^2

4. _____

5) 4×10^9 is _____ \times the value of 8×10^7

5. _____

6) 4×10^3 is _____ \times the value of 5×10^9

6. _____

7) 8×10^2 is _____ \times the value of 6×10^4

7. _____

8) 3×10^4 is _____ \times the value of 2×10^7

8. _____

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

9. _____



Finding Relative Value with Powers of Ten

Name: **Answer Key**

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

1) 5×10^8 is _____ \times the value of 7×10^6

$$\frac{5 \times 10^8}{7 \times 10^6} = \frac{5}{7} \times \frac{10^8}{10^6} = \frac{5}{7} \times 10^2 = 0.714 \times 10^2$$

2) 9×10^8 is _____ \times the value of 5×10^3

$$\frac{9 \times 10^8}{5 \times 10^3} = \frac{9}{5} \times \frac{10^8}{10^3} = \frac{9}{5} \times 10^5 = 1.8 \times 10^5$$

3) 8×10^7 is _____ \times the value of 9×10^8

$$\frac{8 \times 10^7}{9 \times 10^8} = \frac{8}{9} \times \frac{10^7}{10^8} = \frac{8}{9} \times 10^{-1} = 0.889 \times 10^{-1}$$

4) 5×10^5 is _____ \times the value of 2×10^2

$$\frac{5 \times 10^5}{2 \times 10^2} = \frac{5}{2} \times \frac{10^5}{10^2} = \frac{5}{2} \times 10^3 = 2.5 \times 10^3$$

5) 4×10^9 is _____ \times the value of 8×10^7

$$\frac{4 \times 10^9}{8 \times 10^7} = \frac{4}{8} \times \frac{10^9}{10^7} = \frac{1}{2} \times 10^2 = 0.5 \times 10^2$$

6) 4×10^3 is _____ \times the value of 5×10^9

$$\frac{4 \times 10^3}{5 \times 10^9} = \frac{4}{5} \times \frac{10^3}{10^9} = \frac{4}{5} \times 10^{-6} = 0.8 \times 10^{-6}$$

7) 8×10^2 is _____ \times the value of 6×10^4

$$\frac{8 \times 10^2}{6 \times 10^4} = \frac{8}{6} \times \frac{10^2}{10^4} = \frac{4}{3} \times 10^{-2} = 1.333 \times 10^{-2}$$

8) 3×10^4 is _____ \times the value of 2×10^7

$$\frac{3 \times 10^4}{2 \times 10^7} = \frac{3}{2} \times \frac{10^4}{10^7} = \frac{3}{2} \times 10^{-3} = 1.5 \times 10^{-3}$$

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

$$\frac{3 \times 10^3}{9 \times 10^6} = \frac{3}{9} \times \frac{10^3}{10^6} = \frac{1}{3} \times 10^{-3} = 0.333 \times 10^{-3}$$

Answers

1. **71.4**

2. **180,000**

3. **0.0889**

4. **2,500**

5. **50**

6. **0.0000008**

7. **0.01333**

8. **0.0015**

9. **0.000333**