



Finding Relative Value with Powers of Ten

Name: _____

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

Answers

1) 2×10^3 is _____ \times the value of 8×10^9

1. _____

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

2. _____

3) 7×10^6 is _____ \times the value of 5×10^3

3. _____

4) 5×10^2 is _____ \times the value of 7×10^9

4. _____

5) 6×10^8 is _____ \times the value of 2×10^5

5. _____

6) 6×10^5 is _____ \times the value of 2×10^9

6. _____

7) 7×10^9 is _____ \times the value of 2×10^2

7. _____

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

8. _____

9) 5×10^3 is _____ \times the value of 6×10^7

9. _____



Finding Relative Value with Powers of Ten

Name: **Answer Key**

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

1) 2×10^3 is _____ \times the value of 8×10^9

$$\frac{2 \times 10^3}{8 \times 10^9} = \frac{2}{8} \times \frac{10^3}{10^9} = \frac{1}{4} \times 10^{-6} = 0.25 \times 10^{-6}$$

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

$$\frac{2 \times 10^8}{3 \times 10^9} = \frac{2}{3} \times \frac{10^8}{10^9} = \frac{2}{3} \times 10^{-1} = 0.667 \times 10^{-1}$$

3) 7×10^6 is _____ \times the value of 5×10^3

$$\frac{7 \times 10^6}{5 \times 10^3} = \frac{7}{5} \times \frac{10^6}{10^3} = \frac{7}{5} \times 10^3 = 1.4 \times 10^3$$

4) 5×10^2 is _____ \times the value of 7×10^9

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

5) 6×10^8 is _____ \times the value of 2×10^5

$$\frac{6 \times 10^8}{2 \times 10^5} = \frac{6}{2} \times \frac{10^8}{10^5} = \frac{3}{1} \times 10^3 = 3 \times 10^3$$

6) 6×10^5 is _____ \times the value of 2×10^9

$$\frac{6 \times 10^5}{2 \times 10^9} = \frac{6}{2} \times \frac{10^5}{10^9} = \frac{3}{1} \times 10^{-4} = 3 \times 10^{-4}$$

7) 7×10^9 is _____ \times the value of 2×10^2

$$\frac{7 \times 10^9}{2 \times 10^2} = \frac{7}{2} \times \frac{10^9}{10^2} = \frac{7}{2} \times 10^7 = 3.5 \times 10^7$$

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

$$\frac{6 \times 10^2}{7 \times 10^7} = \frac{6}{7} \times \frac{10^2}{10^7} = \frac{6}{7} \times 10^{-5} = 0.857 \times 10^{-5}$$

9) 5×10^3 is _____ \times the value of 6×10^7

$$\frac{5 \times 10^3}{6 \times 10^7} = \frac{5}{6} \times \frac{10^3}{10^7} = \frac{5}{6} \times 10^{-4} = 0.833 \times 10^{-4}$$

Answers

1. **0.00000025**

2. **0.0667**

3. **1,400**

4. **0.0000000714**

5. **3,000**

6. **0.0003**

7. **35,000,000**

8. **0.00000857**

9. **0.0000833**