

Finding Relative Value with Powers of Ten

Name: _____

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

Answers

1) 3×10^6 is _____ \times the value of 9×10^8

1. _____

2) 3×10^3 is _____ \times the value of 7×10^5

2. _____

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

3. _____

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

4. _____

5) 8×10^9 is _____ \times the value of 3×10^6

5. _____

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

6. _____

7) 8×10^5 is _____ \times the value of 4×10^3

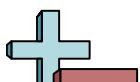
7. _____

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

8. _____

9) 5×10^3 is _____ \times the value of 4×10^2

9. _____



Finding Relative Value with Powers of Ten

Name: **Answer Key**

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

1) 3×10^6 is _____ \times the value of 9×10^8

$$\frac{3 \times 10^6}{9 \times 10^8} = \frac{3}{9} \times \frac{10^6}{10^8} = \frac{1}{3} \times 10^{-2} = 0.333 \times 10^{-2}$$

2) 3×10^3 is _____ \times the value of 7×10^5

$$\frac{3 \times 10^3}{7 \times 10^5} = \frac{3}{7} \times \frac{10^3}{10^5} = \frac{3}{7} \times 10^{-2} = 0.429 \times 10^{-2}$$

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

$$\frac{7 \times 10^3}{3 \times 10^6} = \frac{7}{3} \times \frac{10^3}{10^6} = \frac{7}{3} \times 10^{-3} = 2.333 \times 10^{-3}$$

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

$$\frac{7 \times 10^2}{2 \times 10^5} = \frac{7}{2} \times \frac{10^2}{10^5} = \frac{7}{2} \times 10^{-3} = 3.5 \times 10^{-3}$$

5) 8×10^9 is _____ \times the value of 3×10^6

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

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

$$\frac{4 \times 10^8}{7 \times 10^2} = \frac{4}{7} \times \frac{10^8}{10^2} = \frac{4}{7} \times 10^6 = 0.571 \times 10^6$$

7) 8×10^5 is _____ \times the value of 4×10^3

$$\frac{8 \times 10^5}{4 \times 10^3} = \frac{8}{4} \times \frac{10^5}{10^3} = \frac{2}{1} \times 10^2 = 2 \times 10^2$$

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

$$\frac{7 \times 10^8}{4 \times 10^5} = \frac{7}{4} \times \frac{10^8}{10^5} = \frac{7}{4} \times 10^3 = 1.75 \times 10^3$$

9) 5×10^3 is _____ \times the value of 4×10^2

$$\frac{5 \times 10^3}{4 \times 10^2} = \frac{5}{4} \times \frac{10^3}{10^2} = \frac{5}{4} \times 10^1 = 1.25 \times 10^1$$

Answers

1. **0.00333**

2. **0.00429**

3. **0.002333**

4. **0.0035**

5. **2,667**

6. **571,000**

7. **200**

8. **1,750**

9. **12.5**