



Finding Relative Value with Powers of Ten

Name: _____

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

Answers

1) 4×10^8 is _____ \times the value of 3×10^9

1. _____

2) 7×10^5 is _____ \times the value of 3×10^8

2. _____

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

3. _____

4) 6×10^8 is _____ \times the value of 5×10^3

4. _____

5) 2×10^4 is _____ \times the value of 6×10^6

5. _____

6) 2×10^3 is _____ \times the value of 6×10^6

6. _____

7) 2×10^6 is _____ \times the value of 8×10^5

7. _____

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

8. _____

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

9. _____



Finding Relative Value with Powers of Ten

Name: **Answer Key**

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

1) 4×10^8 is _____ \times the value of 3×10^9

$$\frac{4 \times 10^8}{3 \times 10^9} = \frac{4}{3} \times \frac{10^8}{10^9} = \frac{4}{3} \times 10^{-1} = 1.333 \times 10^{-1}$$

2) 7×10^5 is _____ \times the value of 3×10^8

$$\frac{7 \times 10^5}{3 \times 10^8} = \frac{7}{3} \times \frac{10^5}{10^8} = \frac{7}{3} \times 10^{-3} = 2.333 \times 10^{-3}$$

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

$$\frac{9 \times 10^5}{6 \times 10^9} = \frac{9}{6} \times \frac{10^5}{10^9} = \frac{3}{2} \times 10^{-4} = 1.5 \times 10^{-4}$$

4) 6×10^8 is _____ \times the value of 5×10^3

$$\frac{6 \times 10^8}{5 \times 10^3} = \frac{6}{5} \times \frac{10^8}{10^3} = \frac{6}{5} \times 10^5 = 1.2 \times 10^5$$

5) 2×10^4 is _____ \times the value of 6×10^6

$$\frac{2 \times 10^4}{6 \times 10^6} = \frac{2}{6} \times \frac{10^4}{10^6} = \frac{1}{3} \times 10^{-2} = 0.333 \times 10^{-2}$$

6) 2×10^3 is _____ \times the value of 6×10^6

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

7) 2×10^6 is _____ \times the value of 8×10^5

$$\frac{2 \times 10^6}{8 \times 10^5} = \frac{2}{8} \times \frac{10^6}{10^5} = \frac{1}{4} \times 10^1 = 0.25 \times 10^1$$

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

$$\frac{7 \times 10^9}{5 \times 10^5} = \frac{7}{5} \times \frac{10^9}{10^5} = \frac{7}{5} \times 10^4 = 1.4 \times 10^4$$

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

$$\frac{3 \times 10^4}{5 \times 10^2} = \frac{3}{5} \times \frac{10^4}{10^2} = \frac{3}{5} \times 10^2 = 0.6 \times 10^2$$

Answers

1. **0.1333**

2. **0.002333**

3. **0.00015**

4. **120,000**

5. **0.00333**

6. **0.000333**

7. **2.5**

8. **14,000**

9. **60**