

Finding Relative Value with Powers of Ten

Name: _____

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

Answers

1) 4×10^5 is _____ \times the value of 7×10^9

1. _____

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

2. _____

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

3. _____

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

4. _____

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

5. _____

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

6. _____

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

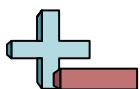
7. _____

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

8. _____

9) 6×10^4 is _____ \times the value of 8×10^5

9. _____



Finding Relative Value with Powers of Ten

Name: **Answer Key**

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

1) 4×10^5 is _____ \times the value of 7×10^9

$$\frac{4 \times 10^5}{7 \times 10^9} = \frac{4}{7} \times \frac{10^5}{10^9} = \frac{4}{7} \times 10^{-4} = 0.571 \times 10^{-4}$$

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

$$\frac{6 \times 10^7}{2 \times 10^2} = \frac{6}{2} \times \frac{10^7}{10^2} = \frac{3}{1} \times 10^5 = 3 \times 10^5$$

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

$$\frac{9 \times 10^8}{8 \times 10^9} = \frac{9}{8} \times \frac{10^8}{10^9} = \frac{9}{8} \times 10^{-1} = 1.125 \times 10^{-1}$$

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

$$\frac{8 \times 10^3}{5 \times 10^7} = \frac{8}{5} \times \frac{10^3}{10^7} = \frac{8}{5} \times 10^{-4} = 1.6 \times 10^{-4}$$

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

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

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

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

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

$$\frac{8 \times 10^4}{3 \times 10^2} = \frac{8}{3} \times \frac{10^4}{10^2} = \frac{8}{3} \times 10^2 = 2.667 \times 10^2$$

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

$$\frac{9 \times 10^8}{8 \times 10^3} = \frac{9}{8} \times \frac{10^8}{10^3} = \frac{9}{8} \times 10^5 = 1.125 \times 10^5$$

9) 6×10^4 is _____ \times the value of 8×10^5

$$\frac{6 \times 10^4}{8 \times 10^5} = \frac{6}{8} \times \frac{10^4}{10^5} = \frac{3}{4} \times 10^{-1} = 0.75 \times 10^{-1}$$

Answers

1. **0.0000571**

2. **300,000**

3. **0.1125**

4. **0.00016**

5. **0.015**

6. **0.00002333**

7. **266.7**

8. **112,500**

9. **0.075**