Finding Relative Value with Powers of Ten

Name:

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

1) 9×10^4 is _____ × the value of 7×10^2

2) 4×10^7 is _____ × the value of 8×10^5

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

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

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

6) 3×10^2 is _____ × the value of 7×10^5

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

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

9) 6×10^2 is _____ × the value of 3×10^5

Answers

1. _____
2. _____
3. _____
4. _____
5. _____
6. _____
7. _____
8. _____
9. _____

1-9	89	78	67	56	44	33	22	11	0

Finding Relative Value with Powers of Ten Name: **Answer Key**

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

1) 9×10^4 is _____ × the value of 7×10^2

$\frac{9 \times 10^4}{7 \times 10^2} = \frac{9}{7} \times \frac{10^4}{10^2} = \frac{9}{7} \times 10^2 = 1.286 \times 10^2$

2) 4×10^7 is _____ × the value of 8×10^5

$\frac{4 \times 10^7}{8 \times 10^5} = \frac{4}{8} \times \frac{10^7}{10^5} = \frac{1}{2} \times 10^2 = 0.5 \times 10^2$

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

$\frac{9 \times 10^5}{6 \times 10^7} = \frac{9}{6} \times \frac{10^5}{10^7} = \frac{3}{2} \times 10^{-2} = 1.5 \times 10^{-2}$

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

$\frac{2 \times 10^4}{9 \times 10^3} = \frac{2}{9} \times \frac{10^4}{10^3} = \frac{2}{9} \times 10^1 = 0.222 \times 10^1$

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

$\frac{4 \times 10^2}{3 \times 10^3} = \frac{4}{3} \times \frac{10^2}{10^3} = \frac{4}{3} \times 10^{-1} = 1.333 \times 10^{-1}$

6) 3×10^2 is _____ × the value of 7×10^5

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

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

$\frac{9 \times 10^4}{2 \times 10^5} = \frac{9}{2} \times \frac{10^4}{10^5} = \frac{9}{2} \times 10^{-1} = 4.5 \times 10^{-1}$

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

$\frac{5 \times 10^9}{9 \times 10^4} = \frac{5}{9} \times \frac{10^9}{10^4} = \frac{5}{9} \times 10^5 = 0.556 \times 10^5$

9) 6×10^2 is _____ × the value of 3×10^5

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

Answers

1. **128.6**
2. **50**
3. **0.015**
4. **2.22**
5. **0.1333**
6. **0.000429**
7. **0.45**
8. **55,600**
9. **0.002**

1-9	89	78	67	56	44	33	22	11	0