Finding Relative Value with Powers of Ten

Name:

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

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

2) 3×10^4 is _____ × the value of 8×10^6

3) 7×10^6 is _____ × the value of 8×10^9

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

5) 4×10^3 is _____ × the value of 9×10^6

6) 6×10^2 is _____ × the value of 8×10^3

7) 7×10^4 is _____ × the value of 3×10^9

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

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

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

$\frac{2 \times 10^7}{7 \times 10^4} = \frac{2}{7} \times \frac{10^7}{10^4} = \frac{2}{7} \times 10^3 = 0.286 \times 10^3$

2) 3×10^4 is _____ × the value of 8×10^6

$\frac{3 \times 10^4}{8 \times 10^6} = \frac{3}{8} \times \frac{10^4}{10^6} = \frac{3}{8} \times 10^{-2} = 0.375 \times 10^{-2}$

3) 7×10^6 is _____ × the value of 8×10^9

$\frac{7 \times 10^6}{8 \times 10^9} = \frac{7}{8} \times \frac{10^6}{10^9} = \frac{7}{8} \times 10^{-3} = 0.875 \times 10^{-3}$

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

$\frac{9 \times 10^2}{4 \times 10^9} = \frac{9}{4} \times \frac{10^2}{10^9} = \frac{9}{4} \times 10^{-7} = 2.25 \times 10^{-7}$

5) 4×10^3 is _____ × the value of 9×10^6

$\frac{4 \times 10^3}{9 \times 10^6} = \frac{4}{9} \times \frac{10^3}{10^6} = \frac{4}{9} \times 10^{-3} = 0.444 \times 10^{-3}$

6) 6×10^2 is _____ × the value of 8×10^3

$\frac{6 \times 10^2}{8 \times 10^3} = \frac{6}{8} \times \frac{10^2}{10^3} = \frac{3}{4} \times 10^{-1} = 0.75 \times 10^{-1}$

7) 7×10^4 is _____ × the value of 3×10^9

$\frac{7 \times 10^4}{3 \times 10^9} = \frac{7}{3} \times \frac{10^4}{10^9} = \frac{7}{3} \times 10^{-5} = 2.333 \times 10^{-5}$

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

$\frac{7 \times 10^5}{4 \times 10^4} = \frac{7}{4} \times \frac{10^5}{10^4} = \frac{7}{4} \times 10^1 = 1.75 \times 10^1$

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

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

Answers

1. **286**
2. **0.00375**
3. **0.000875**
4. **0.000000225**
5. **0.000444**
6. **0.075**
7. **0.00002333**
8. **17.5**
9. **0.0003**

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