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 6×10^9

1. _____

2. _____

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

3. _____

4. _____

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

5. _____

6. _____

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

7. _____

8. _____

9. _____

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

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

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

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

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

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

1) 9×10^4 is _____ × the value of 6×10^9

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

1. **0.000015**

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

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

2. **30**

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

$$\frac{3 \times 10^3}{7 \times 10^9} = \frac{3}{7} \times \frac{10^3}{10^9} = \frac{3}{7} \times 10^{-6} = 0.429 \times 10^{-6}$$

3. **0.000000429**

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

$$\frac{4 \times 10^5}{8 \times 10^8} = \frac{4}{8} \times \frac{10^5}{10^8} = \frac{1}{2} \times 10^{-3} = 0.5 \times 10^{-3}$$

4. **0.0005**

5. **0.0000444**

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

$$\frac{4 \times 10^4}{9 \times 10^8} = \frac{4}{9} \times \frac{10^4}{10^8} = \frac{4}{9} \times 10^{-4} = 0.444 \times 10^{-4}$$

6. **2,000**

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

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

7. **150**

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

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

8. **0.01143**

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

$$\frac{8 \times 10^3}{7 \times 10^5} = \frac{8}{7} \times \frac{10^3}{10^5} = \frac{8}{7} \times 10^{-2} = 1.143 \times 10^{-2}$$

9. **0.00000333**

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

$$\frac{3 \times 10^3}{9 \times 10^8} = \frac{3}{9} \times \frac{10^3}{10^8} = \frac{1}{3} \times 10^{-5} = 0.333 \times 10^{-5}$$

Math

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