

**Palomar College Math Placement Test Study Guide
Prealgebra**

Topic 5: Exponents, roots and scientific notation

1. Write in scientific notation: 0.0000000456
2. Write in decimal notation: 3.21×10^9
3. In April 2005, the United States national debt was approximately 7.8 trillion dollars. Write the national debt in scientific notation.
4. $\sqrt{14.5}$ is closest to what whole number?
5. If $1 < \sqrt{x} < 4$, then what can you say about x?
 - a. $0 < x < 3$
 - b. $1 < x < 4$
 - c. $1 < x < 2$
 - d. $1 < x < 16$
6. Evaluate: $\sqrt{3^2 + 4^2}$
7. Evaluate: $\left(\frac{3}{4}\right)^2$
8. Evaluate: a) -2^2 b) $(-2)^2$ c) -2^3 d) $(-2)^3$
9. $6^2 \cdot 2^4$
10. $5 \cdot (2 - 3)^2 - 4^2$

Answers are on the next page.

**Palomar College Math Placement Test Study Guide
Prealgebra**

Topic 5: Exponents, roots and scientific notation

Answers:

1. 4.56×10^{-8}
2. 3,210,000,000
3. 7.8×10^{12}
4. 4
5. (d)
6. 5
7. 9/16
8. a) -4 b) 4 c) -8 d) -8
9. 576
10. -11