Practice Problems for Exponents, Roots, and Logarithms

from www.topmath.info

1 What is 40 cubed?

2 What can x be, if x^3 + 64 = 0?

3 A number, u, has 6 added to it to produce a second number. The cube root of the second number is -1. What is u?

4 A number, v, has 8 added to it to produce a second number. The fifth root of the second number is -0.3. What is v?

5 A number, t, has 6 added to it to produce a second number. The cube root of the second number is 0.4. What is t?

Please e-mail comments and suggestions to: **edu@ezlink.com**

Practice Problems for Exponents, Roots, and Logarithms
from www.topmath.info

6 A number, t, has 8 added to it to produce a second number. The fifth root of the second number is 0.1. What is t?

7 If x^2 + x = 6, what are the two possible values of x^2 - x?

8 What is the square root of 2,304?

9 What is the cube root of 512,000?

10 What is the cube root of 343,000?

Practice Problems for Exponents, Roots, and Logarithms
from www.topmath.info

11 What is 3 squared?

12 Suppose tx^-1 = 8. What is t?

13 What is 31 squared?

14 What is 40 squared?

15 What is 85 cubed?

Practice Problems for Exponents, Roots, and Logarithms
from www.topmath.info

1 ANSWER: 64,000

2 ANSWER: -4. EXPLANATION: The number whose cube is 64 is 4. Because x^3 must be negative, x must also be negative.

3 ANSWER: -7. EXPLANATION: The second number is -1 cubed, or -1. This is 6 greater than u, so we subtract to get the answer.

4 ANSWER: -8.00243. EXPLANATION: The second number is -0.3 to the fifth power, or -0.00243. This is 8 greater than v, so we subtract to get the answer.

5 ANSWER: -5.936. EXPLANATION: The second number is 0.4 cubed, or 0.064. This is 6 greater than t, so we subtract to get the answer.

Practice Problems for Exponents, Roots, and Logarithms
from www.topmath.info

6 ANSWER: -7.99999. EXPLANATION: The second number is 0.1 to the fifth power, or 0.00001. This is 8 greater than t, so we subtract to get the answer.

7 ANSWER: 2 and -3. EXPLANATION: You can factor x^2 + x to be x(x+1). These are consecutive integers that multiply to a product of 6. The first two such integers that come to mind are 2 and 3, and of course, -3 and -2 form the other solution.

8 ANSWER: 2401

9 ANSWER: 8,100

10 ANSWER: 3,375

11 ANSWER: 9

12 ANSWER: 8x^1. EXPLANATION: The expression x^-1 means 1/(x^1). If we multiply this by x^1, the two cancel each other, and we need only multiply by 8 to equal the number on the right side of the equation.

13 ANSWER: 961

14 ANSWER: 1,600

15 ANSWER: 614,125