

2303 Test 2 Practice Test

1. Circle the following words that apply to the number 2:

even	odd
prime	composite
positive	negative
integer	whole number
irrational	real number
undefined	natural number

2. Give the following set, pick out which numbers are of the types listed and write them beside the description:

$$\{-2^{-2}, \frac{5^2}{0}, \sqrt{4^2}, \sqrt{7}, 1.5 \times 10^3, -2.2 \times 10^{-3}, \frac{3}{4}, .01001000100001000001\dots, \frac{0}{0.2}\}$$

undefined

Real

negative

positive

natural

whole

integers

rational

irrational

even

odd

3. Find the LCM and GCF of 42, 56, and 70

Find the LCM and GCF of 40, 48, and 100

4. Simplify the following:

$$\frac{4.2 \times 10^{-2}}{14}$$

$$\frac{125}{0.2}$$

$$\frac{48}{8.0 \times 10^2}$$

$$\frac{3^{-1}(2^2)(5^{\frac{2}{3}})}{9(2^{-1})(5^{-\frac{1}{3}})}$$

$$\frac{8.1 \times 10^{-2}}{27}$$

5. Perform the following operations:

$$3^{-1}(2 + 4^{-1})$$

$$\frac{1}{16} + \frac{3}{24} - \frac{5}{4}$$

$$2(5^{\frac{1}{3}}) + 5^{\frac{1}{3}} - 4(5^{\frac{1}{3}})$$

$$2^{\frac{1}{2}}(2^{\frac{3}{2}} - 2^{\frac{1}{2}})$$

$$2(5^{-1}) - 2(3^{-1})$$

6. Comparing numbers: Fill in the blank with $<$, $>$, $=$

$$5^{-2} \text{ ______ } 5 \times 10^{-1}$$

$$\sqrt{7} \text{ ______ } 3$$

$$-30024^0 \text{ ______ } 1$$

$$4^{\frac{1}{2}} \text{ ______ } 2$$

$$-\frac{1}{3} \text{ ______ } -\frac{1}{5}$$

7. Find at least 5 ways to represent each of the following numbers

111

16

-36

$\frac{1}{81}$

8. For each of the following equations, state which property of real number arithmetic (commutative, associative or distributive) is used to show that the left side of the equation is equal to the right side of the equation.

$$20 + (42 + 32) = (20 + 42) + 32$$

$$25 + 35 = 35 + 25$$

$$(4 + 3)7 = 28 + 21$$

$$33 + 22 = 11(3 + 2)$$

$$55 * 3 = 3 * 55$$

$$10 * (3 * 5) = (10 * 3) * 5$$

