

Name: SAMPLE

Date: _____

Pre-Algebra CHAPTER 4 Test Practice 1

List the positive factors of each number. (1pt each)

1) 123

factors: 1 3 41 123

Answers

1) see left

Simplify each expression. (1pt each)

2) 2^8

2) 256

3) $a^6 \cdot a \cdot a^{10}$

$6 + 1 + 10$

3) a^{17}

Use the order of operations to simplify. (2pts each)

4) $15 - (9 + 1)^2 \div 5$

10^2
 $15 - 100 \div 5$
 $15 - 20$
 -5

4) -5

5) -9^3

$-9 \times 9 \times 9$

5) -729

Write the prime factorization. Use exponents where possible. (1pt each)

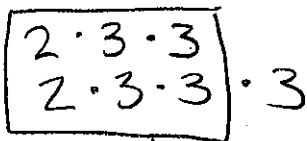
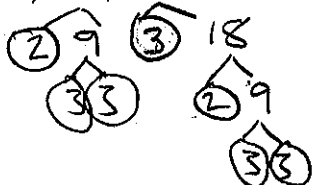
6) 365



6) 5 · 73

Find the Greatest Common Factor. (2pts each) USE PRIME FACTORIZATION

7) 18, 54

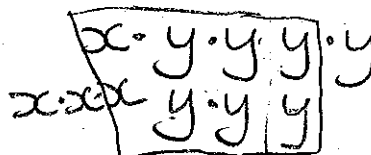
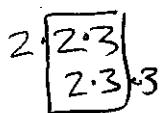
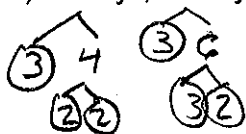


↓ in common 18

7) 18

Find the Greatest Common Factor

8) $12xy^4, 18x^3y^3$



8) $6xy^3$

Write in simplest form. (2pts each)

9) $\frac{9y^8z^3}{18y^2z^3} = \frac{1}{2}y^6$ or $\frac{y^6}{2}$

9) $\frac{y^6}{2}$

Write a sentence to define Rational Numbers. (1pt)

10) A rational number is a number that can be written in the form $\frac{a}{b}$

10) see left

Graph the following rational numbers on the number line below. (2pts)

11) -2.13 0.99 $-\frac{2}{3}$ $\frac{11}{10}$

11) see left



Simplify each expression. (2pts)

12) $-6k^2 \cdot 8k^8 = -6 \cdot 8 = -48$ $k^{(2+8)} = k^{10}$

12) $-48k^{10}$

13) $(2^6)^3$ Write as an exponent.

$2^{6 \times 3}$ or $(2^6)(2^6)(2^6) = 2^{6+6+6}$

13) 2^{18}

14) $\frac{5w^6}{30w^8} = \frac{1}{6}w^{-2} = \frac{1}{6w^2}$

14) $\frac{1}{6w^2}$

Write the expression without using a fraction bar. (2pts)

15) $\frac{e^7}{e^3 f^6} = e^{(7-3)} f^{(7-6)} = e^4 f$

15) $e^{-2} f$

Write the number in scientific notation. (2pts)

16) 0.0000000125 1.25×10^{-8}

16) 1.25×10^{-8}

Write the number in standard form. (2pts)

17) 9.33×10^{11}
933,000,000,000

17) see left

Multiply then express the number in scientific notation. (2pts)

18) $(3 \times 10^{-4})(8 \times 10^8) = 24 \times 10^{(-4+8)} = 24 \times 10^4 = 2.4 \times 10^5$

18) see left