

Exam 1 Prealgebra M75 Prof. L. A. Month

WRITE YOUR ANSWERS AND SHOW YOUR WORK ON THE PAPER PROVIDED.
YOU MAY USE YOUR CALCULATOR.

(4%) 1. Round as indicated.

- a. Round 823,567 to the nearest ten thousand.
- b. Round 823,567 to 3 significant figures.

(5%) 2. Fill in the blanks.

$$\frac{x}{y} = \frac{\quad}{\quad} = \frac{\quad}{\quad} \div \frac{\quad}{\quad} = \frac{\quad}{\quad} \text{ divided by } \frac{\quad}{\quad}$$

$a \cdot b = b \cdot a$ because multiplication is _____

$\{1, 2, 3, 4, \dots\}$ are _____ numbers

- (6%) 3. a. Find the perimeter of a rectangle with length 10" and width 2". Include the units.
b. Find the area of a rectangle with length 25 m and width 3 m. Include the units.

- (8%) 4. a. Find the volume of a shoebox with length 10 cm, width 2 cm, and height 3 cm. Include the units.
b. Write 5^3 as a product of factors.
c. Write $2 \cdot 2 \cdot 2 \cdot 2$ in exponential form.
d. x is called the _____ and y is called the _____ in the exponential form x^y .
e. Which is bigger 9^3 or 10^2 ? You may use your calculator.

(15%) 5. a. Fill in the blanks. If $2 \cdot 3 = 6$ then $\frac{\quad}{\quad} \div \frac{\quad}{\quad} = \frac{\quad}{\quad}$ because division undoes multiplication.

b. Evaluate each of the following. State DNE if the expression is undefined.

$$0/2$$

$$2/0$$

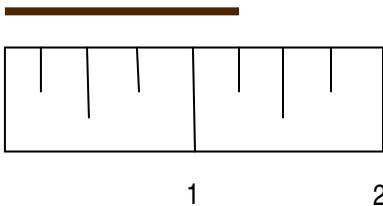
$$0/0$$

$$2/1$$

c. Evaluate the expression. Show each step. $5 \cdot 3^2 - (1 + 5(2 - 1^3)) \div 2$

(5%) 6. Use $F = 9C/5 + 32$ to convert 20°C to $^\circ\text{F}$.

(2%) 7. Measure the line shown above the ruler.



- (10%) 8. a. Find all the factors of 80.
b. Find the factor pairs of 36.

- (19%)9. a. What is the definition of a prime number?
b. What is an easy way to check if a number is divisible by 3 without dividing?
c. Find the prime factorization of 12.
d. Find the prime factorization for 110.
e. Find the GCF of 56 and 105.

- (7%)10. a. Find 3 equivalent fractions for $\frac{3}{8}$.

b. Simplify $\frac{20}{72}$.

c. Reduce $\frac{5}{20}$ to lowest terms.

- (6%)11. a. Change $7\frac{2}{5}$ to an improper fraction.

b. Convert $\frac{11}{3}$ to a mixed number.

- (13%)12. Multiply.

a. $\frac{1}{2} \cdot \frac{2}{3}$

b. $\frac{2}{9} \cdot 21$

c. $\frac{3}{5} \cdot \frac{2}{7}$

d. $\frac{2}{4} \cdot \frac{3}{21}$

e. $\frac{2}{9} \cdot \frac{3}{4}$

f. $\frac{2}{9} \cdot \frac{21}{4}$

- g. What is $\frac{1}{3}$ of $6\frac{2}{5}$? Leave your answer as a fraction. Do not convert to a mixed number.