



Jakarta International
School
6th Grade
Practice Test 2 Number Patterns
and Fractions- Black

Name: _____

Date: _____

Score: _____

Vocabulary

1) Fill in the blanks. (1pt each)

a. When prime numbers are separated by one composite number, they are called

_____.

b. 2^{-2} is the _____ of 2^2

Equivalent Fractions and Simplest form (2pts)

2) Find the numerator of the fraction $\frac{\quad}{12x^2y^2z^2}$ so that it is equivalent to $\frac{13x^3y^2z^5}{4y}$

3) Write the fraction in simplest form. (1pt)

$$\frac{85y^2z}{136yz}$$

Comparing Fractions

4) Is the fraction $\frac{7}{11}$ between $\frac{3}{5}$ and $\frac{9}{13}$ Show working to back up your answer (2pts)

Decimals and Fractions

5) Express as a decimal. Show work. (1pt)

$$\frac{13}{18}$$

6) Express the repeating decimal as a fraction. Show your work. (2pts)

$$0.\overline{45}$$

Operations with fractions and mixed numbers

7) Show your working when you solve each problem. Give your answer in simplest form and check your answer. (2pts each)

a. $15t^2 \div \frac{-5t}{-2}$

b. $\frac{68y^3}{91x} \cdot n = \frac{4y^2z}{7}$

c. If you take $\frac{1}{3}, \frac{1}{2}$ and $\frac{1}{7}$ of a number and the sum is 82, what is the number?

d. $(9^0 \times 16^{-1}) \div (6)^{-2} =$

8) Application Problems.

Show your working when you solve each problem. Give your answer in simplest form.
(2pts each)

a. Jasmine solved an equal number of word problems each day. After 5 days, she had $\frac{7}{12}$ of the word problems left to solve. After another 2 days she had 25 word problems left to solve. How many word problems did she have to solve at first?

b. The Smiths bought a house. It increased in value by $\frac{1}{5}$ of its original value, then dropped in value by $\frac{1}{5}$ when the regional council decided to develop a motorway nearby. One way of calculating the increased value is to multiply by 1.2

What number should the Smiths use to multiply by to calculate the decreased value?

c. A teacher usually divides his class into six groups of n students each. However, on Monday, three of the students were absent, so the teacher divided the remaining students into seven groups of m students each. On Tuesday, four students were absent, so he went back to n students per group, but there was one fewer group than he usually has. How many students are in the class?

d. To avoid problems with storm water runoff, the zoning regulations state that no more than $\frac{3}{8}$ of a property can be paved in concrete. What is the maximum area of concrete paving allowed on a property of 872m^2 ?

Unit Analysis (2pts)

10) A tsunami is travelling at 500 Km/hr across the Pacific Ocean.

a) How fast is it going in m/s ?

b) How many Kilometers does the tsunami travel in 5 minutes? Use Unit Analysis.

