Gr. 7 Math Test Factors and Multiples

Procedures

1. Make a factor rainbow for each number
   a) 16 **b)** 32

2. Find **3** multiples of each number. What is the LCM of these two numbers?
   a) 6 **b)** 4

3. Circle the prime numbers. Put a box around the composite numbers.

   7 9 11 4 31 83 55 29

Concept/Communication

1. Explain why 7 is a prime number but 14 isn=t.
2. Explain why 3 is a factor of 15 and 24. E
3. Explain why 16 is a multiple of 1, 2, 4, 8 and 16

Thinking (Show all your work)

1. There are 44 Grade 6s going to the curling tournament. A van can hold 12 people and a car 4 people. How many vans and cars will they need to get to the tournament?

2. Anne gets her hair cut every 3 months in one year. She buys a new shirt every 4th month. How many times does Anne have a new haircut and a new shirt in the same month? What month would it be?

3. Consider how 30 is written as the product of prime numbers. 30= 2 x 3x 5
   Write 168 as the product of prime numbers.

Categories	Level 1	Level 2	Level 3	Level 4
Knowledge and Understanding $ **facts, terms, procedural skills**	demonstrates limited knowledge of facts, terms, procedural skills by applying them with several major errors demonstrates a limited (1-2)	demonstrates some knowledge of facts, terms, procedural skills by applying them with several minor errors or omissions (3)	demonstrates considerable knowledge of facts, terms, procedural skills, by applying them with few minor errors or omissions (4-5)	demonstrates thorough knowledge of facts, terms, procedural skills, by applying them with rarely any errors or omissions (6)
Thinking **understands the problem ,makes a plan(chooses a strategy)** **carries out the plan, looks back**	demonstrates limited effectiveness in: understanding what the problem is asking choosing a strategy and rarely carrying it through to an accurate solution	demonstrates some effectiveness in: understanding what the problem is asking choosing an appropriate strategy and sometimes carrying it through to an accurate solution	demonstrates considerable effectiveness in: understanding what the problem is asking choosing an appropriate strategy and usually carrying it through to an accurate solution	is highly effective in: understanding what the problem is asking choosing an effective strategy and consistently carrying it through to an accurate solution
Communication **expresses mathematical ideas visually and in writing using numbers symbols, diagrams and words**	communicates mathematical thinking with limited effectiveness with little evidence of organization, uses conventions, vocabulary and terminology with limited effectiveness to convey mathematical information	communicates mathematical thinking with some effectiveness with some degree of organization, uses conventions, vocabulary and terminology with some effectiveness to convey basic mathematical information	communicates mathematical thinking with considerable effectiveness with an appropriate degree of organization, clarity, uses conventions, vocabulary and terminology with considerable effectiveness to convey mathematical information	communicates mathematical thinking effectively with a high degree of organization, clarity uses conventions, vocabulary and terminology effectively to convey mathematical information