# Number Sense Test Review

1. Explain the difference between prime and composite numbers. Give examples of each:

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_____
_____
_____

2.  a) Label the factor(s) and multiple(s) in the equation below:

$$4 \times 2 = 8$$

b)  List the next six multiples in the pattern:

3. What is the Greatest Common Factor of 64 and 16?

4. Create a factor tree for the number **78**. Show prime factorization.

7. Find the least common multiple for 3, 9 and 27:

8. A local television network shows its news broadcast every 3 hours. A rival network shows its news broadcast every 5 hours. If they are both playing right now, in how many hours will they both be on air at the same time again?

9. Serena wants to create snack bags for a trip she is going on. She has 6 granola bars and 10 pieces of dried fruit. If the snack bags should be identical without any food left over, what is the greatest number of snack bags Serena can make?

10. You're trying to teach a fellow classmate how to **simplify** exponent equations. What are the rules for simplifying equations that multiply, divide, and use brackets with exponents? Provide examples.

Multiplying:

_____
_____

Dividing:

_____
_____

Brackets:

_____
_____

11. The area of a square gymnasium is 256 metres squared. If you were to build bleachers that fit exactly along the length of one side (corner to corner), how long would they be?

12. Estimate the square root of 170.

13. Jill was asked to find a number with a square root between 17 and 18, but she is not sure what to do. Show (using numbers, pictures, words) Jill the steps to solving this problem:

14. a) Use the power of 10 to write the number in the statement below in expanded form:

The distance from Earth to the Moon is 384 000 km.

b) The diameter of the planet Jupiter is 143 000km. Show this number in scientific notation:

c) Explain why it is helpful for astronomists to use scientific notation when discussing the large distances between planets, stars and satellites in space.

15. Add brackets to make the following equations correct:

a) 4 + 5 x 6 - 1 = 29

b) $3^2$ x 6 + 7 x 2 + 4 = 184

16. Explain why mathematicians use the Order of Operations:

_____
_____
_____
_____
_____