

Also do:

1. My homework assignment for today is to solve one math problem and one physics problems or to solve one chemistry problem (this can be seen as **(A AND B) OR C** statement). I can get “+” for positive (True) outcome of my homework or “-” otherwise as grades,. What I will get if

- I will only do the math problem,
- I will only do the physics problem,
- I will do math and physics problem,
- I will not do anything,
- I will only do chemistry problem,
- I will do math and chemistry problem?

Draw a truth table and list all possible combinations.

2. My homework assignment for today is to solve one math problem and to solve one physics or one chemistry problem (this can be seen as **A AND (B OR C)** statement). I can get “+” or “-” as grades. What I will get if

- I will only do the math problem.
- I will only do the physics problem.
- I will do math and physics problems.
- I will do physics and chemistry problems?

Draw a truth table and list all possible combinations.

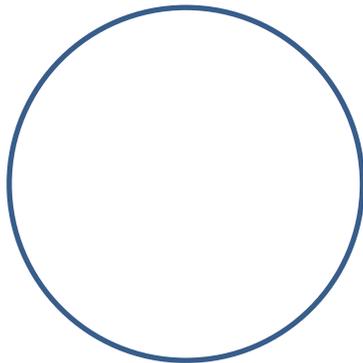
3. Simplify the following expressions:

a. $(a^3)^2a$; b. $(x^4)^3:x$; c. $a^8:(a^2)^3$; d. $y \cdot (y^5)^2$
 e. $(a^2)^4 \cdot (a^3)^2$; f. $(a^8)^2:(a^4)^4$

4. Evaluate (hint: don't just calculate, think, how to do it in efficient way):

$$101101 \cdot 999 - 101 \cdot 999999;$$

5. Using a ruler (straight edge, no marks), and a compass, find the center of the circle(hint: draw 2 chords):



6. What is the general expression for the multiples of 3, multiples of 5?

Example: multiples of 2 (even numbers) can be written as $2k, k \in N$.

7. Solve the following equations:

a. $2^x \cdot 2^{2x} = 64$; b. $3^n \cdot 9 = 81$; c. $5^p = 1$