

NOTIFICATIONS:

Please prepare for a quiz next session.

SchoolNova, in collaboration with the math dept, will be offering AMC 8 contest. It will be given in the evening of Nov 13, 2018. The contest will be free of charge, but seats are limited, so all students interested in taking the contest should register by filling this google form:

<https://goo.gl/forms/7OKidg3L1HqGnxft2>

More info about AMC 8 can be found here:

<https://www.maa.org/math-competitions/amc-8>

Attach lined paper showing your solutions neatly.

If your work is not organized, it will not be reviewed!

- Let p , q , and r be the following statements:

p : My computer is very fast.

q : I will finish my project on time.

r : I will pass the course.

Express the following English sentences as symbolic expressions:

- My computer is not very fast or I would finish my project on time.
 - I will not finish my project on time and I will not pass the course.
 - It is not true that I will finish my project on time and pass the course.
 - My computer is very fast or I will not finish my project on time and pass the course.
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- Write the If-then form, the converse, the inverse, and the contrapositive of the conditional statement.
"Olympians are athletes."
Decide whether each statement is true or false.
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- Complete the following truth table.

P	Q	R	$P \wedge R$	$\sim Q$	$Q \vee R$	$P \wedge \sim Q$
T	T	T				
T	T	F				
T	F	T				
T	F	F				
F	T	T				
F	T	F				
F	F	T				
F	F	F				

4. Construct a truth table for the statement.

$$(q \leftrightarrow p) \wedge \sim r$$

5. The Barr triplets have an annoying habit: Whenever a question is asked of the three of them, two tell the truth and the third lies. When I asked them which was born last, they replied as follows.

Mary: Katie was born last.

Katie: I am the youngest.

Annie: Mary is the youngest.

Which of the Barr triplets was born last?

6. Solve for x: $-15.5 = 2(-3.1x + 4) - 8$

7. $4 - \frac{y}{3} = \frac{2}{3}y + 6$
Solve for y:

8. A rectangle has a width of $4x$. The length of the rectangle is 3 less than 2 times the width. The perimeter of the rectangle is 114 units. What is the length of the longest side of the rectangle?

9. Simplify the expressions.

a) $\frac{5x^3y^9}{20x^2y^{-2}}$

b) $\frac{12xy}{7x^4} \cdot \frac{7x^5y^2}{4y}$

10. Find the value of d and x .

$d =$ _____

$x =$ _____

