school
nova.™
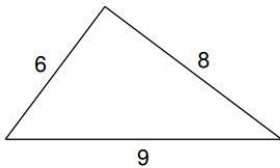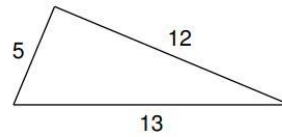
1) Do the following lengths form a right triangle? Check using the Pythagorean Theorem $(a^2 + b^2 = c^2)$
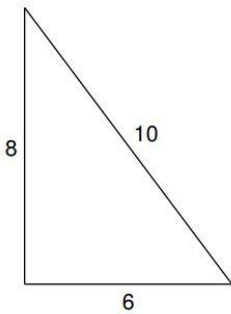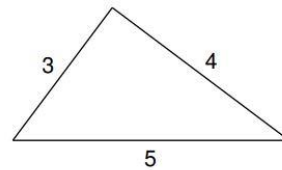
1)

2)

3)

4)

2) Simplify the following expressions (by multiplying and combining like terms)

a) $2xy\,(x^2 - y)$

d) $(x + 5)(x - 3)$

b) $(a - b)^2$

e) $(2x + 1)(x + 2)$

c) $(x + 1)(x - 1)$

f) (challenge) $(a + b + c)^2$

3) Solve the following equations:

a) $(x - 4)(x + 2) = 0$

c) $2x^2 = 128$

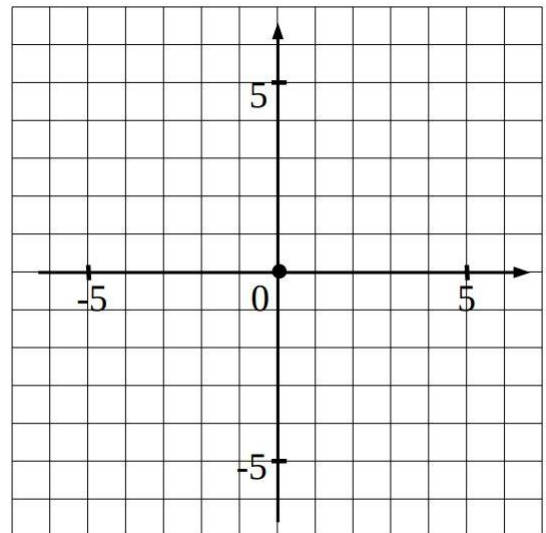b) $(2x - 3.75)(\frac{3}{4}x + \frac{7}{8}) = 0$

d) $\sqrt{x + 3} = 4$

4) On the following plane, plot the following points:

A = (4,5)   B = (-2,3)   C = (1, -2)

$\overrightarrow{AB}, \overrightarrow{BC}$ and $\overrightarrow{CA}$ are the lines between points A, B, and C.

What are $\overrightarrow{AB}, \overrightarrow{BC}$ and $\overrightarrow{CA}$ as vectors?

Find the lengths of $\overrightarrow{AB}, \overrightarrow{BC}$ and $\overrightarrow{CA}$ (Using the distance formula)