

Activity 3:

Which of the following are True or False?

$(1+3)^2 = 1^2 + 3^2$ True False

$(-2+3)^2 = (-2)^2 + 3^2$ True False

$(1+3)^2 = 1^2 + 2(1)(3) + 3^2$ True False

$(-2+3)^2 = (-2)^2 + 2(-2)(3) + 3^2$ True False

I. What can you say about

$(a+b)^2 = a^2 + b^2$ True False .

Give the reason for your answer. (Hint: Try to find pattern in previous problems.)

II. What do you think $(a+b)^2$ should equal to. Explain in detail your reason for the answer.

III. Answer the following (calculators are allowed).

$\frac{3^2}{3^2+2} \neq \frac{7}{2}$ True False

$\frac{4(3)^2}{7+4} \neq \frac{9}{7}$ True False

$\frac{7(3)^2}{3^2+2} = \frac{63}{11}$ True False

$\frac{4(3)^2}{7+4(3)} \neq \frac{36}{19}$ True False

IV. Which of the above are False? Explain in your words why these are False.

V. Without using Calculators answer the following. Write a detailed process which lead to your answers.

$\frac{7x^3}{2x^3+2} = \frac{5}{6}$ True False

$\frac{5x^2}{5-3y} \neq \frac{x^2}{-3y}$ True False