May 25, 2007

Homework sheet 8 (**Algebra, geometric and technic issues**)   Name:

Question 1. When $(x + y)^2 = x^2 + y^2$?

Question 2. Fast way to compute:

$$57^2 - 55^2 = \quad ; \qquad 65 \times 65 = \quad .$$

Question 3. Simplify

$$(\frac{1}{3}x + \frac{2}{5}x) - (\frac{2}{3} + \frac{2}{5})x = \quad ; \qquad (\frac{1}{3} + x) - (\frac{2}{3} + x) = \quad .$$

Question 4. If $x = 2$, show that $x^4 - 2x^2 - 8 = 0$.

Question 5. If $x = -2$, find

$$x^4 - 2x^2 =$$

Question 6. If

$$\frac{x - 2}{x} = \frac{3}{4},$$

can you find $x =$?