Name:

Date:

School:

Facilitator:

4.06 Rational Roots (42 Points)

**For the following polynomials list the possible rational zeros. (Do not find the zeros!)**

1. *P*(*x*) = *x*5 + 3*x*3 + 2*x* – 6

Possible Roots:

1. *P*(*x*) = 3*x*4 + *x*3 + 2*x*2 – 2

Possible Roots:

1. *P*(*x*) = 2*x*5 + 3*x*4 + 2*x*2 − 2

Possible Roots:

**Using the theorems and techniques of this section, find the zeros of the following polynomial:**

1. *P*(*x*) = *x*3 − 4*x*2 + *x* + 6

Possible Roots:

Factors:

Zeros:

|  |
| --- |
| *Show your work below:* |
|  |

1. Find the zeros of the polynomial *P*(*x*) = 4*x*³ − 3*x*² − 25*x* − 6.

Possible Roots:

Factors:

Zeros:

|  |
| --- |
| *Show your work below:* |
|  |