

2.6 Find Rational Zeros

Friday, December 8, 2017 8:06 AM

List possible rational zeros

Rational Zero Theorem: $\frac{p}{q} = \frac{\text{factors of constant term } a_0}{\text{factors of leading coefficient } a_n}$

$$2x^2 - 6x - 8$$

Factors of 8: $\pm 1, \pm 2, \pm 4, \pm 8$

Factors of 2: $\pm 1, \pm 2$

Possible rational zeros: $\pm \frac{1}{1}, \pm \frac{2}{1}, \pm \frac{4}{1}, \pm \frac{8}{1}, \pm \frac{1}{2}, \pm \frac{2}{2}, \pm \frac{4}{2}, \pm \frac{8}{2}$

Find Zeros using Graphing Calculator

$$f(x) = x^3 - 4x^2 - 15x + 18$$

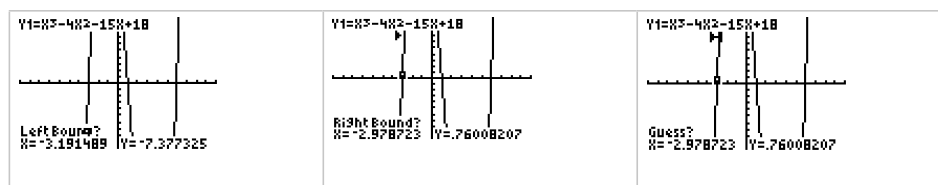
1) Type function into y= screen

```
Plot1 Plot2 Plot3
Y1=X^3-4X^2-15X+18
Y2=
Y3=
Y4=
Y5=
```

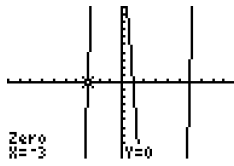
2) Type 2nd key, Calc, #2 zero,

```
RESOLVE
1:value
2:zero
3:minimum
4:maximum
5:intersect
6:dy/dx
7:ff(x)dx
```

3) Find left boundary enter, right boundary enter, guess enter



4) Your Zero



5) Repeat for other Zeros