Math 3/3H Name:\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_Per:\_\_\_

3.2 Add/Sub Rationals

Perform the indicated operation, if possible simplify.

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Expand: (Binomial Theorem)

1. $\left(x-4y\right)^{3}$ 22. $\left(2x+y\right)^{4}$

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Find the zeros, multiplicities and touch/cross.

 23. $f\left(x\right)= -3x^{2}\left(x-2\right)^{3}\left(x+1\right)$ 24. $f\left(x\right)=-3\left(x-4\right)^{2}\left(x-1\right)^{3}$

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Determine the End Behavior without graphing:

 25. $f\left(x\right)=-2x^{4}+3x^{2}-2$ 26. $f\left(x\right)=-3x^{3}+2x-1$

