## Arithmetic with Polynomials - Worksheet 3



Graph of $f(x)=x^{2}-7 x+12$

1. What are the $x$-intercepts of the function $f(x)=x^{2}-7 x+12$ ?
2. Draw a rough graph of the function $f(x)=x^{2}-7 x+12$.
3. What are the $x$-intercepts of the function $f(x)=x^{3}-2 x^{2}-8 x$ ?
4. Draw a rough graph of the function $f(x)=x^{3}-2 x^{2}-8 x$.
5. Find the $x$-intercepts of the polynomial $x^{3}-x^{2}-9 x+9$.


Graph of $f(x)=x^{3}-2 x^{2}-8 x$
6. Find the $y$-intercepts of the polynomial $x^{3}-x^{2}-9 x+9$.
7. Find the $x$-intercepts of the polynomial $x^{4}-x^{2}$.
8. Do we expect the polynomial $x^{4}-x^{2}$ to be facing up or down? Why?
9. Find the $x$-intercepts of the polynomial $-x^{2}+16$.
10. Do we expect the polynomial $-x^{2}+16$ to be facing up or down? Why?
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