

Write polynomial functions

Name _____

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Date _____

A polynomial function with rational coefficients has the follow zeros. Find all additional zeros.

1) $-3 - 2i$, $3 + \sqrt{2}$

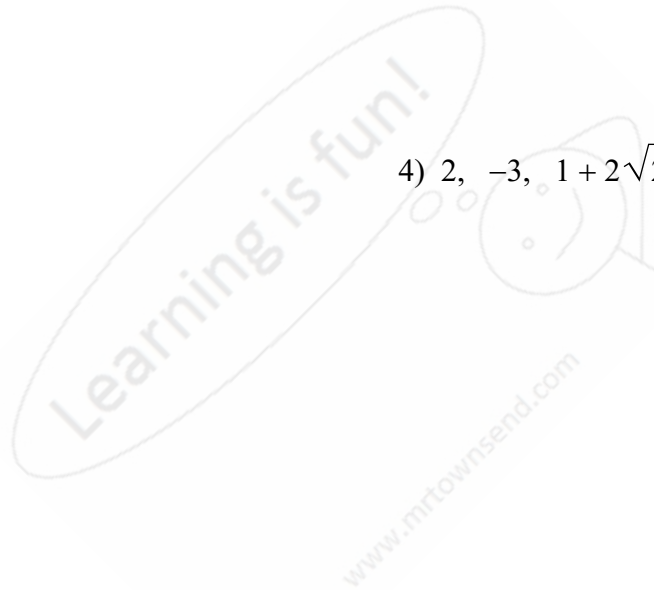
2) -3 , 3 , $3 - 2i$

3) 4 , $2 - 3i$

4) 2 , -3 , $1 + 2\sqrt{2}$

5) $-1 + 2\sqrt{2}$, $-3 + \sqrt{2}$

6) 3 , $-2 - 2i$



Write a polynomial function of least degree with integral coefficients that has the given zeros.

7) $3, 2, -\frac{4}{3}, \frac{5}{4}$

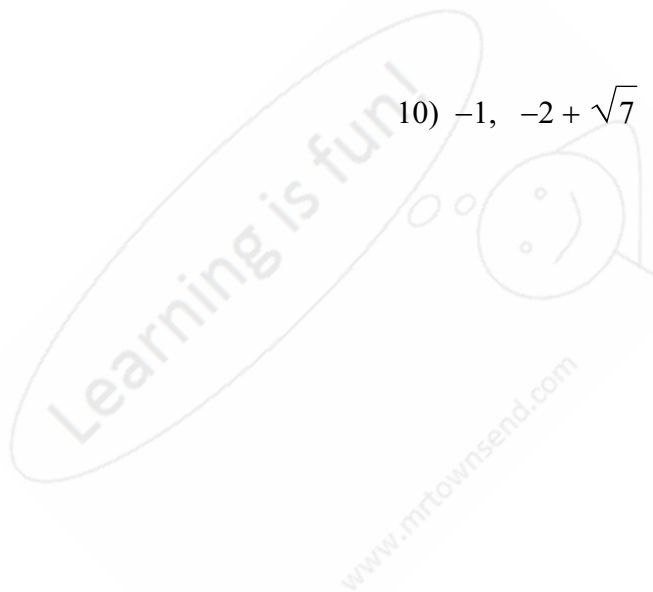
8) $3, -1 + \sqrt{3}$

9) $1, -i$

10) $-1, -2 + \sqrt{7}$

11) $2, -3i$

12) $-4, -3 + \sqrt{3}$



Answers to Write polynomial functions

- 1) $-3 + 2i$, $3 - \sqrt{2}$ 2) $3 + 2i$ 3) $2 + 3i$ 4) $1 - 2\sqrt{2}$
5) $-1 - 2\sqrt{2}$, $-3 - \sqrt{2}$ 6) $-2 + 2i$
7) $f(x) = 12x^4 - 59x^3 + 47x^2 + 106x - 120$ 8) $f(x) = x^3 - x^2 - 8x + 6$
9) $f(x) = x^3 - x^2 + x - 1$ 10) $f(x) = x^3 + 5x^2 + x - 3$ 11) $f(x) = x^3 - 2x^2 + 9x - 18$
12) $f(x) = x^3 + 10x^2 + 30x + 24$

