1. Find the following products:

1. $\left(3x^{2}+x-2\right)\left(5x-2\right)$

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

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

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

2. Find the linear factors of:

1. $3x^{2}-11x-4$

1. $x^{2}-5x+7$

1. $z^{3}+3z^{2}-2z$

3. Find all cubic polynomials with zeros:

1. $\pm 1,4$

1. $-2,1\pm ⅈ$

1. $1, 2\pm \sqrt{3}$

4. Find all quartic polynomials with zeros:

 $\pm \sqrt{2}, 1\pm ⅈ$