

2. $z^3 + 3z^2 - 10z - 24$ has a factor $(z - (-4))$ compute all other factors:

$$z(z + 2)(z + 4)$$

$$z(z + 2)^2$$

$$(z - 3)(z + 2)(z + 4)$$

$$(z - 2)(z + 1)(z + 2)$$

Solution

Apply Long Division.

$$(z - 3)(z + 2)(z + 4)$$