

5. $r^3 + 3r^2 + 2r$ has a factor $(r - (-2))$ compute all other factors:

$$r(r + 3)(r + 4)$$

$$(r - 4)(r - 1)(r + 3)$$

$$r(r + 1)(r + 2)$$

$$(r + 2)(r + 3)^2$$

Solution

Apply Long Division.

$$r(r + 1)(r + 2)$$