

2. $r^3 + 8r^2 + 21r + 18$ has a factor $(r - (-3))$ compute all other factors:

$$(r + 2) (r + 3) (r + 4)$$

$$(r - 2) r (r + 3)$$

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

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

Solution

Apply Long Division.

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