

5.  $r^3 - r^2 - r + 1$  has a factor  $(r - (-1))$  compute all other factors:

$$(r - 1) (r + 1)^2$$

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

$$(r - 1)^2 (r + 1)$$

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

**Solution**

Apply Long Division.

$$(r - 1)^2 (r + 1)$$