

4. $r^3 + 2r^2 - 8r$ has a factor $(r - (-4))$ compute all other factors:

$$(r - 2) (r + 2) (r + 4)$$

$$(r - 4) (r - 2) (r + 1)$$

$$(r - 2) r (r + 4)$$

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

Solution

Apply Long Division.

$$(r - 2) r (r + 4)$$