

2. $q^3 + 10q^2 + 32q + 32$ has a factor $(q - (-4))$ compute all other factors:

$$(q - 4) (q - 1) (q + 4)$$

$$(q + 3) (q + 4)^2$$

$$(q + 2) (q + 4)^2$$

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

Solution

Apply Long Division.

$$(q + 2) (q + 4)^2$$