

1. $q^3 - 6q^2 + 32$ has a factor $(q - (-2))$ compute all other factors:

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

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

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

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

Solution

Apply Long Division.

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