

1.  $k^3 - 7k^2 + 8k + 16$  has a factor  $(k - (-1))$  compute all other factors:

$$(k + 1) (k + 2) (k + 4)$$

$$(k + 1) (k + 3)^2$$

$$(k - 4)^2 (k + 1)$$

$$k^2 (k + 1)$$

**Solution**

Apply Long Division.

$$(k - 4)^2 (k + 1)$$