

1. $y^3 + 5y^2 + 8y + 4$ has a factor $(y - (-2))$ compute all other factors:

$$y (y + 2)^2$$

$$(y - 3) (y + 1) (y + 2)$$

$$(y + 1) (y + 2)^2$$

$$(y - 1) (y + 1) (y + 2)$$

Solution

Apply Long Division.

$$(y + 1) (y + 2)^2$$