

2.  $a^3 + 2a^2 - 16a - 32$  has a factor  $(a - (-4))$  compute all other factors:

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

$$a (a + 3) (a + 4)$$

$$(a - 4) (a + 2) (a + 4)$$

$$(a - 3) a (a + 4)$$

**Solution**

Apply Long Division.

$$(a - 4) (a + 2) (a + 4)$$