

Obkin:

$$\frac{(3-i)(5-i)(2-i)}{(2+i)(2-i)(2-i)} =$$

$$= \frac{6-3i-2i-1}{4+i} =$$

$$\frac{5-5i}{5} = 1-i$$

Obtain:

$$\frac{(5-i)(-1+2i)}{(2+i)^2} =$$

$$\frac{(5+i)(2i-1) - (5+i)(2i-1)}{(4+4i-1) (3+4i)}$$

$$\frac{(10i-5-2-i)(3-4i)}{(3+4i)(3-4i)}$$

$$\frac{(10i - 5 - 2 - i)(3 - 4i)}{(3 + 4i)(3 - 4i)}$$

$$(3 + 4i)(3 - 4i)$$

$$= \frac{(9i - 7)(3 - 4i)}{9 + 16} =$$

$$9 + 16$$

$$= \frac{(27i + 36 - 28 + 28i)}{25} =$$

$$25$$

$$= \frac{55i + 10}{25} = \frac{2}{5} + \frac{11}{5}i$$