

Algebra II

pg 295

2)	$-2-6i$	18)	$-18+i$	34)	$\frac{12+5i}{13}$
4)	$10-5i$	20)	7	36)	$\frac{2-3i\sqrt{5}}{7}$
6)	$-8-3i$	22)	$-13-84i$	38)	$\frac{1+4i}{17}$
8)	$18+15i$	24)	$4+6i\sqrt{5}$	40)	$\frac{-\sqrt{5}+i\sqrt{2}}{7}$
10)	$-6-2i$	26)	169	42)	$\frac{8-6i}{5}$
12)	17	28)	10	44)	$1-2i$
14)	$-1+2i$	30)	$6+3i$	46)	$(1-3i)^2 - 2(1-3i) + 10$ then simplify
16)	$34-2i$	32)	$\frac{1-7i}{5}$		

$$14) (-5 + 3i)(2 - 3i)$$

$$-10 + 15i + 6i - 9i^2$$

$$-10 + 21i + 9$$

$$-1 + 21i$$

$$20) (2 - i\sqrt{3})(2 + i\sqrt{3})$$

$$4 - i^2\sqrt{9}$$

$$4 + 3$$

$$7$$

$$26) (2 - 3i)^2(2 + 3i)^2$$

$$(2 - 3i)(2 + 3i)(2 + 3i)(2 - 3i)$$

$$(4 - 9i^2)(4 - 9i^2)$$

$$13^2$$

$$169$$

$$28) (\sqrt{3} + \sqrt{-7})(\sqrt{3} - \sqrt{-7})$$

$$(\sqrt{3} + i\sqrt{7})(\sqrt{3} - i\sqrt{7})$$

$$\sqrt{9} - i^2\sqrt{49}$$

$$3 + 7$$

$$10$$

$$34) \frac{(5+i)(5+i)}{(5-i)(5+i)}$$

$$\frac{25 + 5i + 5i + i^2}{25 - i^2}$$

$$25 - i^2$$

$$\frac{24 + 10i}{26} = \frac{12 + 5i}{13}$$

$$44) \quad F(x) = \frac{2+x}{2-x} \quad F(1-i)$$

$$\begin{aligned} F(x) &= \frac{2+(1-i)}{2-(1-i)} = \frac{(3-i)(1-i)}{(1+i)(1-i)} \\ &= \frac{3-3i-i+i^2}{1-i^2} = \frac{2-4i}{2} = 1-2i \end{aligned}$$