PAP Precalculus
HW: Complex Numbers

Name: _____
Date; _____ Period: ____

For # 1-6, perform the indicated operation and write the result in standard form.

1. $(4+i)-(7-2i)$

2. $13i-(14-7i)$

3. $\left(\frac{3}{2}+\frac{5}{2}i\right)+(\frac{5}{3}+\frac{11}{3}i)$

4. $(1+i)(3-2i)$

5. $(\sqrt{3}+\sqrt{15}i)(\sqrt{3}-\sqrt{15}i)$

6. $(5-4i)^2$

7. $i^{84}-i^{24}+i^{63}-i^{8}-i^{13}+i^{4}$

_____-_____+____ -____ -_____+____=_____

8. $i^{4}+i^{95}-i^{60}+i^{3}-i^{113}-i^{4}$

_____+_____-____ +____ -_____-_____=_____

For #9-10, write the quotient in standard form.

9. $\frac{2}{4-5i}$

10. $\frac{2+i}{2-i}$

Turn Over →

For #11-14, solve the quadratic equation.

11. $x^2 + 25 = 0$

12. $x^2 + 6x + 10 = 0$

13. $16x^2 - 4x + 3 = 0$

14. $4x^2 + 16x + 15 = 0$