Complex Numbers

1. 6x – 12 = 10(x – 4)

2. $\frac{3}{n}+\frac{7}{n}-\frac{5}{n}=3. $Solve for n.

3. Solve the equation: $\frac{-5}{y+4}+\frac{2}{y-4}=\frac{7}{y^{2}-16}$

4. i(6 - 3i)²

5. (6 + 7i)(6 – 7i)

6. $\frac{3-2i}{4-3i}$

7. 3 |4x – 10| + 20 = 26

8. Solve: 2 ≥ 3 – 2x >- 4

*Simplify the following.*

9. $\frac{10+\sqrt{-225}}{5}$

10. $\sqrt{-144}$ - $\sqrt{-81}$

11. $\sqrt{-27xy^{2}}$

12. (7i)(3i)

13. $\sqrt{\frac{-16}{25}}$ $∙ \sqrt{\frac{-100}{64}}$

14. $\sqrt{-121}$ $∙ \sqrt{4}$

15. (3 – 5i) + (2 + 2i)

16. (1 + 2i) – (3 – 4i)

17. (5 + i)(3 – 2i) 18. (2 – 3i)²

19. $\frac{i}{1-i}$ 20. y = 2x² + 5x + 4