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Module 1 Review Date \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

Simplify each radical.

1. $\frac{2}{3}\sqrt{-72}$ 2. $2i\sqrt{-25}$ 3. $\sqrt[3]{-64x^{8}}$

Solve each equation for x.

4. $\frac{4}{5}x^{2}=-100$ 5. $ -32=2x^{2}-4$

Find the values of x and y that make each equation true.

6. $ 2\left(x-9\right)-\left(3y\right)i=27+57i$ 7. $8yi+4\left(3-x\right)=2(3-4i)$

Simplify the following.

8. $-3i^{10}$ 9. $3+ i^{7}-2i^{8} $ 10. $6i^{25}+4i^{55}$

Simplify.

11. $\left(6-i\right)-3(5-4i)$ 12. $ \left(-6+9i\right)(8+2i)^{2}$

13. $ 2\left(7i-6\right)+i\left(-14-27i\right)$ 14. 

15.  16. $\frac{5-i}{8i}$

17. $\sqrt[4]{128x^{8}y^{21}}$ 18. 

19.  20. $\sqrt[5]{t^{10}}∙\left(s^{8}t^{20}\right)^{\frac{3}{4}}$

21.  22. $ x^{\frac{5}{6}}∙x^{\frac{7}{4}}∙x^{2}$

23. $\sqrt{\frac{27y^{5}}{2}}$ 24. $(-64)^{\frac{-2}{3}}$

25. $\sqrt{-50t^{42}}$ 26. $\frac{100^{\frac{7}{8}}}{\sqrt[8]{100^{3}}}$

27. $\sqrt[3]{\frac{15x^{5}}{12x}}$ 28. $\sqrt[3]{\frac{5x}{6x^{5}}}$