

Name _____

LESSON 1.5

Practice A

Simplify the expression.

1. $\sqrt{18}$
 2. $\sqrt{48}$
 3. $\sqrt{20}$
 4. $\sqrt{98}$
 5. $\sqrt{9} \cdot 3\sqrt{27}$
 6. $\sqrt{12} \cdot \sqrt{7}$
 7. $\sqrt{\frac{25}{16}}$
 8. $\sqrt{\frac{49}{9}}$
 9. $\sqrt{\frac{100}{25}}$
 10. $\sqrt{\frac{27}{1}}$
 11. $\sqrt{\frac{45}{3}}$
 12. $\sqrt{\frac{4}{5}} \cdot \sqrt{\frac{3}{5}}$
 13. $\frac{1}{3+\sqrt{3}}$
 14. $\frac{2}{5-\sqrt{6}}$
 15. $\frac{1+\sqrt{5}}{5+\sqrt{5}}$
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1. $\sqrt{242}$
 2. $\sqrt{153}$
 3. $\sqrt{56}$
 4. $5\sqrt{24} \cdot 2\sqrt{28}$

5. $\sqrt{8} \cdot 3\sqrt{40} \cdot \sqrt{3}$
6. $\sqrt{10} \cdot \sqrt{14}$
7. $\sqrt{\frac{121}{225}}$
8. $\sqrt{\frac{7}{9}} \cdot \sqrt{\frac{4}{7}}$
9. $\sqrt{24} \cdot \sqrt{\frac{80}{192}}$
10. $\frac{3}{4+\sqrt{5}}$
11. $\frac{-6}{5-\sqrt{11}}$
12. $\frac{7-\sqrt{7}}{10+\sqrt{3}}$

Write the expression as a complex number in standard form.

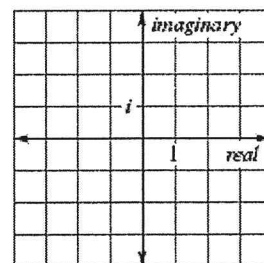
10. $(1 + i) + (3 + i)$
11. $(4 - 3i) + (2 + 6i)$
12. $(-4 - i) - (4 + 5i)$
13. $(5 - 3i) + (-3 - 6i)$
14. $3i(4 + 2i)$
15. $-2i(3 - i)$
16. $(2 + i)(4 + 2i)$
17. $(5 - 2i)(1 - 3i)$
18. $-(3 + i)(7 - 3i)$
19. $-2i(1 + i)(2 + 3i)$
20. $(2 - i)^2$
21. $(5 + 3i)(5 - 3i)$
22. $\frac{5}{3-2i}$
23. $\frac{2-i}{3+4i}$
24. $\frac{1+2i}{\sqrt{2}+i}$
25. $\frac{3}{2-4i} - (3+2i)$

Find the absolute value of the complex number.

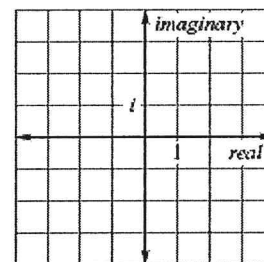
26. $3 - 4i$
27. $1 - i\sqrt{3}$
28. $\sqrt{5} + 2i\sqrt{2}$

Plot the numbers in a complex plane.

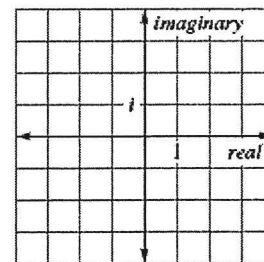
29. $3i$



30. $2 + 2i$



31. $-2 - 3i$



Using the properties of exponents, write the complex number in standard form.

32. $2 + i^2$
33. $3 + i^3$
34. $5 - i^4$
35. $2 - i^5$