

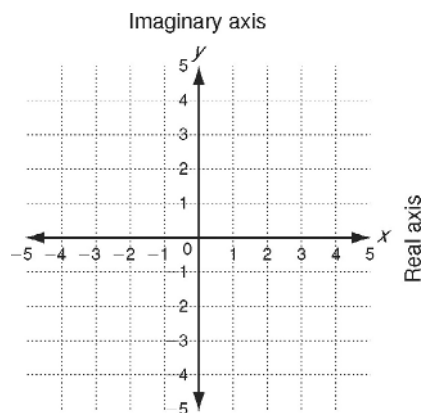
LESSON
13-2

Practice A

Operations with Complex Numbers

Graph each complex number.

1. $2i$
2. $-4i$
3. $3 + i$
4. $-3 - 2i$
5. $2 + 3i$
6. $4 - 4i$



Find each absolute value.

7. $|6 + 2i|$
8. $|3 + i|$
9. $|3 - 4i|$

Add or subtract. Write the result in the form $a + bi$.

10. $6i + 4i$
11. $-i - 3i$
12. $(4i) + (2 + 8i)$

13. $(1 + 2i) + (3 + 4i)$
14. $(2 - 7i) - (5 - 3i)$
15. $(7 - 4i) + (3 - i)$

Multiply. Write the result in the form $a + bi$.

16. $2(3i)$
17. $-4(5i)$
18. $2(6 + 8i)$

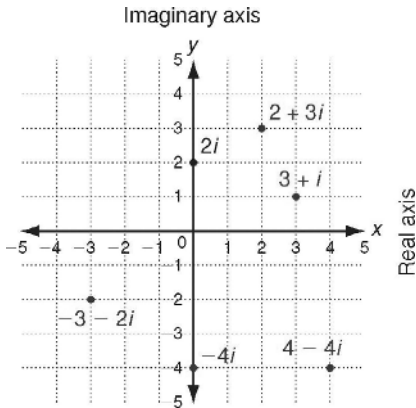
19. $2i(3 + 5i)$
20. $(3 + i)(1 - 4i)$
21. $(1 + 2i)(2 + 5i)$

Simplify.

22. i^7
23. $\frac{2 + 5i}{3i}$
24. $\frac{8 + 2i}{1 - 3i}$

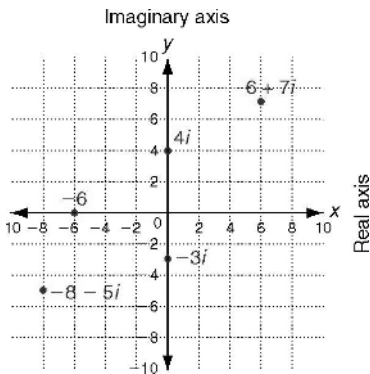
13-2 OPERATIONS WITH COMPLEX NUMBERS

Practice A



- | | |
|--------------------------------|---------------------------------|
| 7. $2\sqrt{10}$ | 8. $\sqrt{10}$ |
| 9. 5 | 10. $10i$ |
| 11. $-4i$ | 12. $2+12i$ |
| 13. $4+6i$ | 14. $-3-4i$ |
| 15. $10-5i$ | 16. $6i$ |
| 17. $-20i$ | 18. $12+16i$ |
| 19. $-10+6i$ | 20. $7-11i$ |
| 21. $-8+9i$ | 22. $-i$ |
| 23. $\frac{5}{3}-\frac{2}{3}i$ | 24. $\frac{1}{5}+\frac{13}{5}i$ |

Practice B

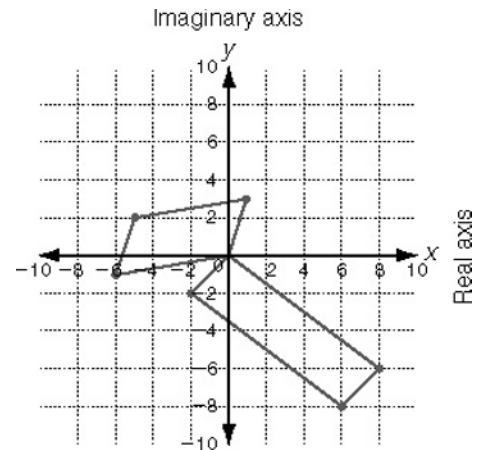


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|----------------|--------------------------------|
| 6. $2\sqrt{5}$ | 7. $\sqrt{26}$ |
| 8. 3 | 9. $5-7i$ |
| 10. $-1-10i$ | 11. $-7+10i$ |
| 12. $9+6i$ | 13. $3+14i$ |
| 14. $9+20i$ | 15. $\frac{4}{3}-\frac{2}{3}i$ |

- | | |
|-----------------------------------|-----------|
| 16. $\frac{14}{17}+\frac{5}{17}i$ | 17. $-2i$ |
| 18. $8+2i$ | |

Practice C

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|-------------------------|-------------------------------|
| 1. $6\sqrt{5}$ | 2. $\sqrt{65}$ |
| 3. $\frac{\sqrt{2}}{2}$ | 4. $13+3i$ |
| 5. $-8-17i$ | 6. $\frac{1}{4}-\frac{1}{2}i$ |
| 7. $-5+2i$ | 8. $6-8i$ |



- | | |
|-----------------------------------|---------------|
| 9. $\frac{53}{65}+\frac{31i}{65}$ | 10. $-14-80i$ |
| 11. $\frac{9}{5}+\frac{7i}{5}$ | 12. $2-i$ |
| 13. $-4i$ | 14. 10 |
| 15. $14+5i$ | |

Reteach

- | | |
|---------------|----------------|
| 6. 8 | 7. $\sqrt{5}$ |
| 8. 3 | 9. $\sqrt{29}$ |
| 10. 9 | 11. 5 |
| 12. $9-i$ | 13. $7-4i$ |
| 14. $4+8i$ | 15. $3-8i$ |
| 16. $-2i$ | 17. $-15+20i$ |
| 18. $10i$ | 19. $7+4i$ |
| 20. $-12+16i$ | |

Challenge

- Square roots should be simplified first.
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