

## EXTRA PRACTICE — Exercises

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### Unit VII – Relations of Rational Number Degree Part E – The Complex Numbers as a Mathematical System Lesson 2 – Addition and Subtraction

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For each of the following, perform the indicated addition or subtraction, simplifying your result and writing it in the standard form of a complex number.

- $(2 + 5i) + (6 + 3i)$
- $(5 + \sqrt{-36}) + (-9 - \sqrt{-4})$
- $(6 - 8i) - (-3 + 4i)$
- $15 - 10\sqrt{-12}$
- $(8 - \sqrt{-36}) - (-18 - \sqrt{-30})$
- $(-3 - 6i) + (7 + 10i)$
- $(6 + 7i) - (2 + 4i)$
- $(-7 + 3\sqrt{-50}) + (3 - \sqrt{-45})$
- $(5 - \sqrt{-8}) + (-7 + \sqrt{-18})$
- $(7 - 8i) - (5 - 3i)$
- $(-3 - i) - (5 - 2i)$
- $(-10 + i) + (8 - 4i)$
- $(\frac{2}{3} + \frac{1}{2}i) - (\frac{4}{3} - \frac{1}{4}i)$
- $(-7 + \sqrt{-3}) + (2 - \sqrt{-48})$
- $(5 - 8i) - (-7 + 3i)$
- $(-3 + 7i) - (-8 + 2i)$
- $(-\frac{1}{6} + \frac{3}{2}i) + (-4i - \frac{2}{9})$
- $(-3 + 2i) - (5 - 3i)$
- $(5 + \sqrt{-4}) - (-7 + \sqrt{-9}) + (6 - \sqrt{-16})$
- $(4 + 2i) - (2 - i) + (3 + 4i)$

# EXTRA PRACTICE — Answer Key

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For each of the following, perform the indicated addition or subtraction, simplifying your result and writing it in the standard form of a complex number.

1.  $8 + 8i$

2.  $-4 + 4i$

3.  $9 - 12i$

4.  $15 - 20i\sqrt{3}$

5.  $26 + i(-6 + \sqrt{30})$

6.  $4 + 4i$

7.  $4 + 3i$

8.  $-4 - (8 + 3\sqrt{5})i$

9.  $-2 + i\sqrt{2}$

10.  $2 + -5i$

11.  $-8 + i$

12.  $-2 - 3i$

13.  $-\frac{2}{3} + \frac{3}{4}i$

14.  $-5 - 3i\sqrt{3}$

15.  $12 + -11i$

16.  $5 + 5i$

17.  $-\frac{7}{18} - \frac{5}{2}i$

18.  $-8 + 5i$

19.  $18 + -5i$

20.  $5 + 7i$