

Dividing Complex Numbers

Key

Simplify.

$$1) \frac{5}{-5i} \quad e$$

$$2) \frac{1}{-2i} \quad \frac{i}{2}$$

$$3) -\frac{2}{i} \quad 2i$$

$$4) \frac{7}{4i} \quad \frac{-7i}{4}$$

$$5) \frac{4+i}{8i} \quad \frac{1-4i}{8}$$

$$6) \frac{-5-i}{-10i} \quad \frac{1-5i}{10}$$

$$7) \frac{9+i}{-7i} \quad \frac{-1+9i}{7}$$

$$8) \frac{6-6i}{-4i} \quad \frac{3+3i}{2}$$

$$9) \frac{2i}{3-9i} \quad \frac{-3+i}{15}$$

$$10) \frac{i}{2-3i} \quad \frac{-3+2i}{13}$$

$$11) \frac{5i}{6+8i} \quad \frac{4+3i}{10}$$

$$12) \frac{10}{10+5i} \quad \frac{4-2i}{5}$$

$$13) \frac{-1+5i}{-8-7i} \quad \frac{-27-47i}{113}$$

$$14) \frac{-2-9i}{-2+7i} \quad \frac{-59+32i}{53}$$

$$15) \frac{4+i}{2-5i} \quad \frac{3+22i}{29}$$

$$16) \frac{5-6i}{-5+10i} \quad \frac{-17-4i}{25}$$

$$17) \frac{-3-9i}{5-8i} \quad \frac{57-69i}{89}$$

$$18) \frac{4+i}{8+9i} \quad \frac{41-28i}{145}$$

$$19) \frac{-3-2i}{-10-3i} \quad \frac{36+11i}{109}$$

$$20) \frac{3+9i}{-6-6i} \quad \frac{-2-i}{2}$$

Solve each equation.

$$1. 5n^2 + 35 = 0 \quad \pm i\sqrt{7}$$

$$3. 4m^2 + 76 = 0 \quad \pm i\sqrt{19}$$

$$5. -5m^2 - 65 = 0 \quad \pm i\sqrt{13}$$

$$2. 2m^2 + 10 = 0 \quad \pm i\sqrt{5}$$

$$4. -2m^2 - 6 = 0 \quad \pm i\sqrt{3}$$

$$6. \frac{3}{4}x^2 + 12 = 0 \quad \pm 4i$$

$$7. 3x^2 + 3 = 0 \quad \pm i$$

$$8. 5x^2 + 125 = 0 \quad \pm 5i$$

$$9. 4x^2 + 20 = 0 \quad \pm i\sqrt{5}$$

$$10. -x^2 - 16 = 0 \quad \pm 4i$$

$$11. x^2 + 18 = 0 \quad \pm 3i\sqrt{2}$$

$$12. 8x^2 + 96 = 0 \quad \pm 2i\sqrt{3}$$