

Name _____

Date _____

Write the divisor, dividend, quotient, and remainder represented by the synthetic division.

$$1. \quad -2 \left| \begin{array}{cccc} 2 & 1 & -1 & 10 \\ & -4 & 6 & -10 \\ \hline 2 & -3 & 5 & 0 \end{array} \right.$$

$$2. \quad 4 \left| \begin{array}{cccc} 3 & -10 & 0 & -5 \\ & 12 & 8 & 32 \\ \hline 3 & 2 & 8 & 27 \end{array} \right.$$

Divide using polynomial long division.

$$3. \quad (x^2 - 6x + 10) \div (x - 1)$$

$$4. \quad (x^2 + 2x - 11) \div (x + 2)$$

$$5. \quad (x^2 + 3x - 18) \div (x + 6)$$

$$6. \quad (x^2 + 3x - 6) \div (x + 5)$$

$$7. \quad (4x^2 - 7x - 4) \div (x - 4)$$

$$8. \quad (2x^2 - x + 5) \div (x + 3)$$

$$9. \quad (x^2 + 4) \div (x - 2)$$

$$10. \quad (x^3 + 11x^2 + 25x - 21) \div (x + 7)$$

Divide using synthetic division.

$$11. \quad (x^2 + 8x - 9) \div (x + 9)$$

$$12. \quad (x^2 - x - 1) \div (x + 1)$$

$$13. \quad (x^2 + 3x - 10) \div (x - 2)$$

$$14. \quad (x^2 - 6x + 4) \div (x + 3)$$

$$15. \quad (x^2 + 5x - 7) \div (x + 4)$$

$$16. \quad (2x^2 - 7x - 15) \div (x - 5)$$

$$17. \quad (x^3 + x + 2) \div (x - 1)$$

$$18. \quad (x^2 - 7) \div (x + 2)$$