

BOARD PROBLEMS Ch. 24

① $5^{13} \cdot 5^6 \div 5^{-6} =$

② SOLVE USING ELIMINATION

$$5x + 4y = -30$$

$$3x - 9y = -18$$

③ SOLVE BY SUBSTITUTION

$$7x + 2y = 13$$

$$x - 2y = 11$$

solve for x, first

④ Factor completely.

$$3x^2 + 27x$$

⑤ $\left[(9^3)^{-4} \right]^{-2} =$

⑥ $(2x + 4)(2x - 4) =$

CH. 24 SQUARE ROOT POLYNOMIALS

§ DIVIDING POLYNOMIALS

$$\sqrt{2^2} = \underline{\quad} \quad \sqrt{x^2} = \underline{\quad} \quad \sqrt{(x+1)^2} = \underline{\quad}$$

$$\textcircled{1} \quad \sqrt{x^2 + 6x + 9}$$

$$\textcircled{2} \quad \sqrt{x^2 + 8x + 16}$$

$$\textcircled{3} \quad \sqrt{x^2 - 12x + 36}$$

$$\textcircled{4} \quad \sqrt{x^2 - 10x + 25}$$

DIVIDING POLYNOMIALS

$$x + 3 \overline{) x^2 + 7x + 13}$$

$$2x + 1 \overline{) 4x^2 - 4x - 3}$$

$$x - 2 \overline{) x^3 - 5x^2 + 11x - 10}$$

$$3x + 2 \overline{) 6x^2 + 5x - 8}$$

PRACTICE

$$\textcircled{1} \sqrt{x^2 + 18x + 81}$$

$$\textcircled{2} \sqrt{x^2 - 14x + 49}$$

$$\textcircled{3} x - 1 \sqrt{x^2 - 7x + 10}$$

$$\textcircled{4} 2x - 7 \sqrt{2x^2 + 7x - 39}$$

$$\textcircled{5} x - 7 \sqrt{x^3 - 13x^2 + 40x + 18}$$

$$\textcircled{6} x + 3 \sqrt{x^3 - 2x^2 - 14x - 5}$$

‡

PROVE.

$$\sqrt{4x^2 + 4x + 1} = 2x + 1$$

when $x = 10$

Find the square root and check.

1. $\sqrt{x^2 + 12x + 36}$

2. $\sqrt{x^2 + 14x + 49}$

3. $\sqrt{4x^2 + 4x + 1}$

Divide and Check.

4. $x + 3 \overline{) x^2 + 10x + 21}$

5. $x + 2 \overline{) x^2 + 7x + 10}$

6. $x + 1 \overline{) x^2 + 7x + 6}$

7. $X + 3 \overline{) X^2 + 8X + 15}$

8. $X + 4 \overline{) X^2 + 9X + 20}$

9. $X - 2 \overline{) X^2 + X - 6}$

Challenge.

10. $X - 2 \overline{) X^3 - 5X^2 + 11X - 10}$

11. $X - 3 \overline{) X^3 + X^2 - 19X + 26}$