S-7

Summary of Chapter Seven.

Rewrite each expression in exponential form.

1. $x \cdot x \cdot x \cdot x =$ x^4

2. $x^3 \cdot x^8 =$ x^{11}

3. $\left(x^3\right)^8 =$ x^{24}

4. $\frac{x^3}{x^8} =$ x^{-5}

Rewrite each expression in radical form.

5. $x^{2/5} =$ $\sqrt[5]{x^2}$ $= \left(\sqrt[5]{x}\right)^2$

6. $x^{-3/4} =$ $\frac{1}{\sqrt[4]{x^3}}$

Find the value of each expression.

7. $10^{-3} =$ $\frac{1}{10^3} = \frac{1}{1000}$

8. $1000^{2/3} =$ $\left(\sqrt[3]{1000}\right)^2 = (10)^2 = 100$

Carry out each polynomial long division.

9. $x+3 \overline{)\, x^2-4x-21}$

$x-7$

x^2+3x

$-7x-21$

$-7x-21$

0

10. $x-7 \overline{)\, x^3-5x^2-15x+7}$

x^2+2x-1

x^3-7x^2

$2x^2-15x$

$2x^2-14x$

$-x+7$

$-x-7$

0