Ch. 25 - BOARD PROBLEMS

① $\sqrt{x^2 - 2x + 1} =$ _____

② $\sqrt{x^2 - \frac{1}{2}x + \frac{1}{16}} =$ _____

③ $\sqrt{x^2 + 24x + 144} =$ _____

④ $\sqrt{4x^2 + 4x + 1} =$ _____

MULTIPLY

⑤ $(x^2 + 4)(x^2 - 2) =$ _____

DIVIDE

⑥ $n+2 \overline{)n^3 + 7n^2 + 14n + 3}$

⑦ $p-5 \overline{)p^3 - 10p^2 + 20p + 26}$

⑧ SIMPLIFY

$$B \cdot B^2 + \frac{3B^{-1}}{B^{-4}} + \frac{5B^4}{B^{-1}} =$$ _____

Ch. 25 - DIFFERENCE OF 2 SQUARES

What does difference mean in math? _____

GENERALIZATION OF RULE

$X^2 - A^2$

( )( )

$(X+A)(X-A)$

_____

EXAMPLES

① $X^2 - 9$ ② $x^2 - 3^2$ ③ $x^2 - 16$

④ $x^2 + 25$ ⑤ $x^2 - 169$ ⑥ $x^2 - 196$

⑦ $4x^2 - 81$ ⑧ $9x^2 - 49$ ⑨ $36x^2 - 1$

opposite direction

$(x+11)(x-11) =$ _____

$(x+8)(x-8) =$ _____

$(2x+7)(2x-7) =$ _____

$(3x-8y)(3x+8y) =$ _____

Ch. 25 - MATH TRICK

WORKS FOR: _____

15	25	35	45	55
x 15	x 25	x 35	x 45	x 55

ALSO WORKS WHEN TWO NUMBERS ARE THE SAME DISTANCE FROM ENDING IN 5.

17
x 13

WHY? $(15+2)(15-2)$

$=$ _____

86	72	61	53
x 84	x 78	x 69	x 57

25C – # 17

If the federal debt of the United States is five trillion dollars and there are 300 million people in the US and each person gave $1000, would that be enough to pay the debt?

Find the factors and check by multiplying.

1. $X^2 - 4 =$

2. $X^2 - 16 =$

3. $X^2 - 25 =$

4. $Y^2 - 144 =$

5. $X^2 - 100 =$

6. $X^2 - 81 =$

7. $X^2 - 49 =$

8. $X^2 - 64 =$

9. $A^2 - 121 =$

10. $X^2 - Y^2 =$

11. $B^2 - 4 =$

12. $X^2 - 9 =$

13. $\begin{array}{r} 65 \\ \times\ 65 \\ \hline \end{array}$

14. $35^2 =$

15. $\begin{array}{r} 48 \\ \times\ 42 \\ \hline \end{array}$

16. $\begin{array}{r} 85 \\ \times\ 85 \\ \hline \end{array}$