## The Weekly Rigor

No. 319

"A mathematician is a machine for turning coffee into theorems."

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## 40 Problems in Factoring by the Difference of Squares

(Part 1)

## PROBLEMS

For each of the following expressions, factor by the method difference of squares.

1.  $x^2 - 3^2$ . 2.  $x^2 - 4^2$ .

3. 
$$x^2 - 1^2$$
. 4.  $x^2 - 25$ .

5.  $x^2 - 36$ . 6.  $x^2 - 144$ .

7.  $49 - x^2$ . 8.  $1 - x^2$ .

9. $81 - x^2$ .	10. $4x^2 - 9$ .
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11.  $16x^2 - 1$ .

12.  $49x^2 - 25$ .

13.  $25 - 4x^2$ .

14.  $36 - 9x^2$ .

15.  $1 - 16x^2$ .

16.  $9x^2 - y^2$ .

"Only he who never plays, never loses."

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