

# The Weekly Rigor

No. 322

“A mathematician is a machine for turning coffee into theorems.”

August 22, 2020

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## 20 Problems in Solving Equations

(Part 1)

### PROBLEMS

For each of the following equations, find all solutions for the unknown variable.

1.  $2x^2 + 15x + 18 = 0$ .

2.  $-2x^2 + 6x = 0$ .

3.  $3x^2 + 6x + 4x + 8 = 0$ .

4.  $2n^3 + 2n = 0$ .

5.  $6x^3 - 6x^2 - 2x^2 + 2x = 0.$

6.  $12x^3 - 8x^2 - 24x + 16 = 0.$

7.  $\theta^2 - 25 = 0.$

8.  $\alpha(\alpha + 7) + 3(\alpha + 7) = 0.$

“Only he who never plays, never loses.”