Calculator OK - 20 Minutes Timed
Find videos on each *[skill]* at www.AlgebraNinja.com Name. _____ Hour:____

High School Level 1 TMT version 1

1. Combine like terms $y + 7x - x + 3y$ [306]

   $4y + 6x$

2. Round to the tenths place: 2.95 [308]

   2.95 ← says round up!

   3.0

3. Simplify: $\frac{-(-7)^2-1}{5}$ [309]

   $\frac{-(49)-1}{5} = \frac{-50}{5} = -10$

4. Simplify: $\sqrt{x^2}$ [310]

   $|x|$ ← absolute value of x

5. Simplify: $x^2 \cdot x^5$ [311]

   $x \cdot x + x \cdot x \cdot x \cdot x \cdot x = x^{2+5} = x^7$

6. Simplify: $\sqrt{20}$ [02]

   $\sqrt{4}\sqrt{5}$

   $2\sqrt{5}$

7. Simplify: -5^2 [312]

   That's not a typo! → -25

   if you thought it was positive compare it to $(-5)^2$ on a calculator.

8. Simplify: $\frac{5}{35}$ [48]

   $\frac{5 \cdot 1}{5 \cdot 7} = \frac{1}{7}$

9. Substitute x = -2 into x^2 using parentheses and simplify: [313]

   x^2

   $(-2)^2 = 4$

10. What is the equation for the x axis and is it vertical or horizontal? [314]

    y axis $x = 0$ vertical

    x axis $y = 0$ Horizontal

11. Does n^2 mean $2n$ or $n \cdot n$? [315]

    n^2... it means $n \cdot n$

12. Solve for n: $n - 4 = 10$ [76]

    $+4 \quad +4$

    $n = 14$

13. Find the percent increase:

    $6.00 increases to $7.05. [145]

    $\frac{\text{Change}}{\text{original}} = \frac{7.05-6}{6} = \frac{1.05}{6} = .175 = 17.5\%$

14. Simplify: $(2x^2)^3$ [28]

    $2^3 \cdot (x^2)^3 = 2^3 \cdot x^{2 \cdot 3} = 8 \cdot x^6$

15. Solve for y: $2x + 4y = 8$ [222]

    $-2x \quad -2x$

    $\frac{4y}{4} = \frac{-2x}{4} + \frac{8}{4}$

    $y = -\frac{1}{2}x + 2$

16. Distribute: $a(2a - 3)$ [28]

    $2a^2 - 3a$

17. Solve for x: $5 + x = -x$ [307]

    $-5 \quad +x \quad +x$

    $5 + 2x = 0$

    $-5 \quad -5$

    $2x = -5$

    $\frac{2x}{2} = \frac{-5}{2}$

    $x = -\frac{5}{2}$

18. List the factors of 10, small to large: [316]

    $1 \times 10 \quad 2 \times 5$

    1, 2, 5, 10

19. Simplify(PEMDAS): $-2 - 4(3 - 1)$ [317] ← First

    $-2 - 4 \cdot (2)$ ← multiply next

    $-2 - 8$ ← subtract last

    -10

20. Convert the following decimal to a percent: .0042 = .42% [318]

    always move decimal 2 places.

    .42%