

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]

$$2.95 \leftarrow \text{says round up!}$$

$$3.0$$

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

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

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

$$|x| \leftarrow \text{absolute value of } x$$

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]

$$\frac{\sqrt{4} \sqrt{5}}{2\sqrt{5}}$$

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]

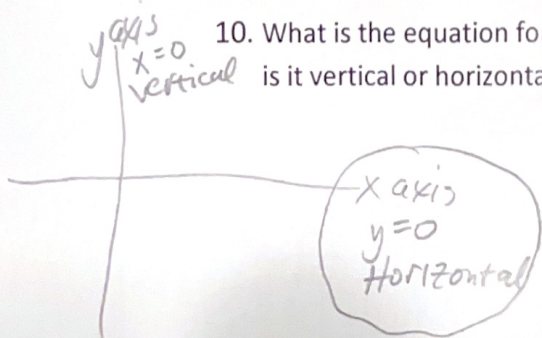
$$\frac{1 \cancel{5} \cdot 1}{1 \cancel{5} \cdot 7} = \frac{1}{7}$$

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]



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

$$n^2 \dots \text{it means } n \cdot n$$

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

$$\begin{array}{r} +4 \quad +4 \\ n - 4 = 10 \\ \hline n = 14 \end{array}$$

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]

$$\begin{array}{r} -2x \quad -2x \\ 2x + 4y = 8 \\ \hline 4y = -2x + 8 \\ \frac{4y}{4} = \frac{-2x + 8}{4} \\ y = -\frac{1}{2}x + 2 \end{array}$$

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

$$2a^2 - 3a$$

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

$$\begin{array}{r} -x + x \quad +x \\ 5 + x = -x \\ \hline 5 + 2x = 0 \\ -5 \quad -5 \\ \hline 2x = -5 \end{array}$$

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

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

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

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

$$1, 2, 5, 10$$

19. Simplify (PEMDAS): $-2 - 4(3 - 1)$ [22]

First

$$\begin{array}{l} -2 - 4(2) \leftarrow \text{multiply next} \\ -2 - 8 \leftarrow \text{subtract last} \\ \hline -10 \end{array}$$

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

always move decimal 2 places.

$$.42\%$$