Class Name : **8A - A**

Instructor Name : **Ms. Ryan**

Student Name : _____

Instructor Note :

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1. Translate the sentence into an equation.

Seven more than the product of a number and 3 *is* 9.

Use the variable x for the unknown number. $3x+7=9$

2. Translate this sentence into an equation.

The product of 4 *and Matt's height is* 52. $4m=52$

Use the variable m to represent Matt's height.

3. Solve for w.

$-6+w=8$

$+6 \quad +6$

$W=14$

4. Solve for v.

$4 \cdot \frac{v}{4}=76 \cdot 4$ $V=304$

Simplify your answer as much as possible.

5. Solve for y.

$\frac{-20}{-5}=\frac{-5y}{-5}$ $Y=4$

Simplify your answer as much as possible.

6. Solve for u.

$-6+4u=-22$

Simplify your answer as much as possible.

$-6+4u=-22$
$+6 \quad +6$
$\frac{4u}{4}=\frac{-16}{4} \quad u=-4$

7. Solve for u.

$14+12u=-16+9u$

Simplify your answer as much as possible.

$14+12u=-16+9u$
$-14 \quad -9u \quad -14 \quad -9u$
$\frac{3u}{3}=\frac{-30}{3} \quad u=-10$

8. Solve for u.

$7u+4(u-7)=27$

Simplify your answer as much as possible.

$7u+4u-28=27$
$+28 \quad +28$
$\frac{11u}{11}=\frac{55}{11} \quad u=5$

9. Evaluate the following.

$|-4+9|=5$
$|-4|+9=13$
$4+9$

10. Evaluate the following.

$|-4+7|=3$
$|-4|+7=11$
$4+7$

11. Solve for u.

$|5u-10|=0$

$5u-10=0$
$+10 \quad +10$
$\frac{5u}{5}=\frac{10}{5} \quad u=2$

12. Solve for u.

$|4u| - 32 = -32$
$+32 \quad +32$

$|4u| = 0 \quad \frac{4u}{4} = \frac{0}{4} \quad u = 0$

13. Solve for x.

$\frac{2}{4} = \frac{x}{6}$ $\quad 2(6) = 4x \rightarrow \frac{12}{4} = \frac{4x}{4} \quad x = 3$

Simplify your answer as much as possible.

14. Solve the following proportion for v.

$\frac{3}{8} \times \frac{v}{11}$ $\quad \frac{33}{8} = \frac{8v}{8} \quad v = \frac{33}{8} \approx 4.1$

Round your answer to the nearest tenth.

15. Solve for x.

$\frac{12}{x+3} \times \frac{8}{5}$

$5(12) = 8(x+3)$
$60 = 8x + 24$
$-24 \quad -24$
$\frac{32}{8} = \frac{8x}{8} \quad x = 4$

Simplify your answer as much as possible.

16. Solve for x.

$\frac{x+8}{18} \times \frac{2}{3}$

$2(18) = 3(x+8)$
$36 = 3x + 24$
$-24 \quad -24$
$\frac{12}{3} = \frac{3x}{3} \quad x = 4$

Simplify your answer as much as possible.

17. There is a sales tax of $25 on an item that costs $310 before tax. The sales tax on a second item is $10.
How much does the second item cost before tax?

$\frac{25}{310} = \frac{10}{x}$ $\quad \frac{\text{tax}}{\text{cost}} = \frac{\text{tax}}{\text{cost}}$

$\frac{25x}{25} = \frac{3100}{25} \quad x = 124$ $\quad \$124$

18. Leila made $95 for 5 hours of work.
At the same rate, how much would she make for 9 hours of work?

$\frac{\text{hr}}{\$} = \frac{\text{hr}}{\$}$ $\quad \frac{5}{95} = \frac{9}{x} \quad \frac{5x}{5} = \frac{855}{5} \quad x = 171 \quad \$171$

19. Solve for q.

$q - r + s = P + r - S$

$+r - S$

$q = P + r - S$

20. Solve for m.

$\frac{mx}{x} = \frac{y}{x}$

$m = \frac{y}{x}$

21. Solve for x.

$\frac{7(x+a)}{7} = \frac{y}{7}$

$x + a = \frac{y}{7}$

$+a \quad\quad -a$

$x = \frac{y}{7} - a$