

Quarterly Exam #1

# MASTERY TEST

Identify the property:

①  $(-5x) + (5x) = 0$

② If  $x=y$  and  $y=z$ , then  $x=z$

Evaluate each expression:  
 $a=-1$   $b=-2$   $c=-3$

③  $2ab^2 - a$

④  $ab - a^2c$



Simplify each expression:

⑤  $2ab - a(b-a) + 4a^2$

⑥  $3(2x-y) - 2(x+3y)$

Solve each equation:

⑦  $\frac{3n-2}{7} = n+2$

⑧  $4(3x-1) - 2x = 5x+11$

Solve the inequality:

⑨  $\frac{2(4n-5)}{10} < \frac{3(n-1)}{5}$

Solve for x:

⑩  $3x - 4y = xy + 1$

Solve and graph:

⑪  $n+2 < 2n+6 < n+12$

⑫  $4n-2 \geq 14$  or  $2n-3 \leq -7$

⑬  $|2x+4| \geq 10$

⑭  $|x-4| - 3 < 9$



Define a variable, set up an equation, and solve:

⑮ Jack is twice as old as Bobby. Eight years from now, Jack will be four times as old as Bobby was four years ago. How old will Jack be next year?

⑯ Three times an integer increased by four equals the same integer decreased by six. Find the integer.

⑰ The length of a rectangle is two inches less than twice its width. Determine the area if the perimeter is  $32 \text{ in.}^2$

⑱ A book is on sale for 20% off. The new purchase price is \$10.08. How much is saved while the book is on sale?

⑥

⑦

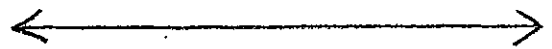
⑧

⑲ Six more than three times a negative odd integer is greater than negative three and less than twelve. Find the integer.

⑨

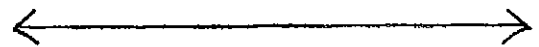
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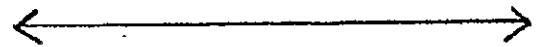


⑳ Merrill earns \$210 per week plus 8% commission on sales. If he takes home \$1590 during a three week period, what were his sales?

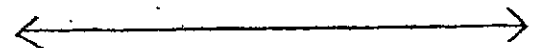
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⑬



⑭



Solve and graph:

㉑  $|x+4| < 9$  and  $x \neq 2$

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