

NAME: _____

Recommendation: _____

M14 PRETEST**This pretest will help determine if you are ready to take M 14.***Each problem is worth 1 point.**For problems 1-3, solve for the indicated variable.*

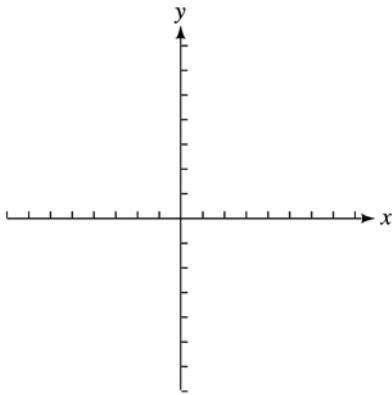
1. $-3 = 3x + 5$

2. $5a + 9 = 7a + 21$

3. $\frac{5}{9} = \frac{z}{12}$

Create algebraic equation and solve the following problem:

4. John has ten coins in his pocket in the amount of \$1.75. If he has only quarters and dimes, how many of each must he have?
5. Solve the following formula for y : $w = 2y - x$
6. Graph the linear equation $3x - 5y = 15$. State the x - and y - intercepts.



7. Find the slope of the line that passes through $(-4, -5)$ and $(-5, -8)$.
8. Solve the system using elimination or substitution:
 $x - 3y = -8$
 $2x + 4y = 24$
9. Simplify. Write your answer without negative exponents: $\frac{16x^2x^{-7}}{(2x^2)^2}$

For problems 10-13, perform the indicated operation and simplify.

10. $(6x^3 - 3x + 7) - (x^3 - 2x - 1)$

11. $\frac{12x^4 - 8x^3 - 4x}{-4x}$

12. $(3a - 5)(a - 3)$

13. $(2y - 3)^2$

Create algebraic equation and solve:

14. Find the area of a rectangular garden whose length is two meters longer than its width and whose perimeter is 24 meters.

For problems 15-18, factor the given polynomial.

15. $7x^2 + 14x$

16. $x^2 + 4x + xy + 4y$

17. $x^2 + 9x + 20$

18. $a^2 - 81$

For problems 19 and 20, solve the quadratic equation.

19. $(x + 3)(2x - 1) = 0$

20. $a^2 - 5a + 6 = 0$