

Name _____



Students entering Geometry Summer packet

Each week this summer please complete the following review sheets. Please show as much work as you can for each problem. These review sheets will be collected on Monday, September 9 and will be counted as a quiz grade for the first quarter. The pages will be graded for accuracy and completion. Doing this review will help you to prepare for the Geometry skills.

Have a great summer!

York Prep Math Department.

The problems in this packet are designed to help you review topics from previous mathematics courses that are important to your success in Geometry. Please try to do each problem and show the work that supports that answer. You are encouraged to complete or attempt to complete all of these questions before beginning Geometry class in September.

Enjoy your summer! We look forward to seeing you in September!

Basic Fraction and Integer Operations

Week 1

Simplify. Leave each answer in reduced form. Show all work. (No calculators please!)

1. $5/9 + 2/3$

2. $3\frac{3}{8} - 1\frac{3}{4}$

3. $2\frac{3}{4} \cdot 3\frac{3}{8}$

4. $12\frac{3}{4} \div 2\frac{1}{2}$

5. $-3 + -9$

6. $26 - 54$

7. $-18 + 24$

8. $15 - (-18)$

9. $-28 - 42$

10. $9 + -14$

11. $(-5)^2$

12. -5^2

13. $5 + 3 - 12 \cdot 2$

14. $8(3 + 4^2) - 12 \div 2$

15. $23 - (-2) + -8 \div 2^2$

Simplifying Expressions

Week 2

Use the distributive property and combining of like terms to simplify each expression completely.

16. $4m + 9 - 7m + m - 17$

17. $3x + 5(2 - x)$

18. $2(m + x) - 3(m - 4x)$

Solving Equations

19. $-3x - 5 = 16$

20. $3(2x - 4) = 9$

21. $(6x - 8) - (5x + 9) = 3$

22. $-6(12 - x) = 36$

23. $\frac{5}{7} = \frac{10}{x+2}$

24. $-4(2x + 3) = 2(x + 6) - 10x$

Linear Equations

25. What is the slope of the line for each of the following:

a, a line that runs through the points $(-4, 2)$ and $(-7, 9)$. _____

b. a horizontal line that runs through the point $(4, -8)$ _____

c. a line parallel to the line with equation $5y - 7x = 10$. _____

d. a line that is perpendicular to the line with equation $y = -\frac{3}{4}x + 1$ _____

26. Are the lines defined by the equations below parallel, perpendicular, or intersecting?

$$\begin{aligned}2x + 5y &= 10 \\ -5x + 2y &= -6\end{aligned}$$

27. Find the point of intersection for each pair of lines defined by the equations:

a. $3x = 9$
 $2x + y = 10$

b. $2x - 3y = 14$
 $x + 2y = 0$

Week 4

Graph each of the following equations.

28. $y = \frac{1}{2}x - 5$

29. $3x + 4y = 12$

30. Find the x and y-intercepts for the equation: $3x - 4y = 12$

Quadratic Equations

Solve each quadratic equation by factoring.

31. $x^2 + 3x = 54$

32. $x^2 + 2x - 24 = 0$

33. $25x^2 + 20x = -4$

34. $2x^2 - 72 = 0$

Week 5

35. The length of a rectangle is four more than twice its width.
The area of the rectangle is 160 sq. feet. What is the length and width of the rectangle?

Simplifying Radicals

Simplify each expression.

36. $\sqrt{24}$

37. $\sqrt{250}$

38. $\sqrt{75} + \sqrt{12} - \sqrt{125}$

38. $7\sqrt{20} + 3\sqrt{500}$

39. $3\sqrt{8} \cdot 5\sqrt{6}$

40. $\frac{1}{\sqrt{3}}$

Week 6

Geometry Facts Review

Find the area of each figure.

