

Name: _____

Algebra 2 2017

Summer Math Packet for students entering ALGEBRA 2

Over the summer to better prepare you for the challenges of Algebra next year, we have put together some worksheets for you to complete over the summer. The packet will be due the first day back to school in the fall.

The worksheets will cover the following topics:

Review Sheet 1 – Solving Linear Equations and Inequalities
Review Sheet 2 – Linear Equations Including Slope and $y=mx+b$
Review Sheet 3 – Radicals
Review Sheet 4 – Polynomials
Review Sheet 5 – Arithmetic

Completing this packet:

- ✓ Assignments will be passed in on the **FIRST** day of school and will count towards your homework grade for Quarter 1.
- ✓ You will be **TESTED** on this information during the first week of school.
- ✓ All of this information will relate to Algebra 2. It is imperative that you know each concept to be successful during the class.
- ✓ For each individual problem you should:
 - Read Directions
 - Show ALL work
 - Leave answers as **REDUCED FRACTIONS**. No decimal answers should be given!
 - **NO WORK=NO CREDIT!**

Good Luck! We hope you have a wonderful summer! See you in the fall!!

Sheet #1 Solving Linear Equations and Inequalities:

Solve:

1. $3x + 2 = -1$

2. $-4 + 2x = -8$

3. $X - 2 = 14 - 3x$

4. $\frac{6}{5} = \frac{2x}{5}$

5. $\frac{3x}{2} = 12$

6. $17 + x = 2(x + 1)$

7. $3x - 2 < 1$

8. $4x - 6 \geq 2x + 8$

9. $-3x + 8 \leq -2x - 5$

Sheet #2 - Linear equations including slope and $y = mx + b$

Find the slope of the line containing the following points:

1. $(-2, 5)$ $(6, -1)$

3. $(0, 2)$ $(3, 1)$

2. $(7, 7)$ $(7, 2)$

4. $(8, -4)$ $(12, -4)$

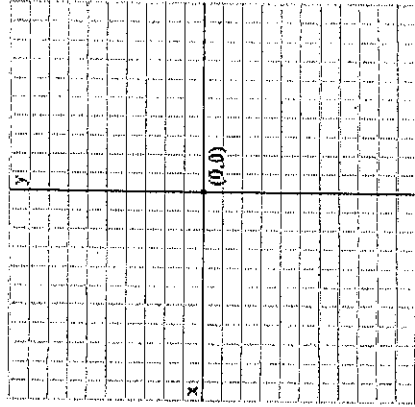
Write the equation of the line in $y = mx + b$ form given the following information:

5. Slope = $\frac{1}{2}$ passing through $(3, 2)$

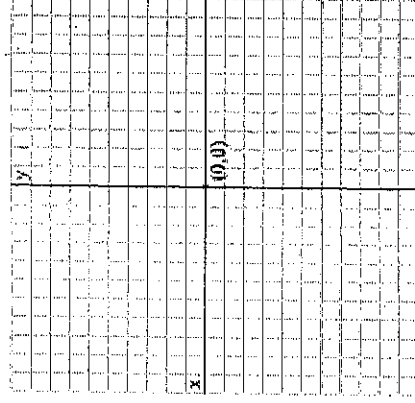
6. Slope = -3 passing through $(-5, 4)$

Find the slope and y intercept, then graph each line:

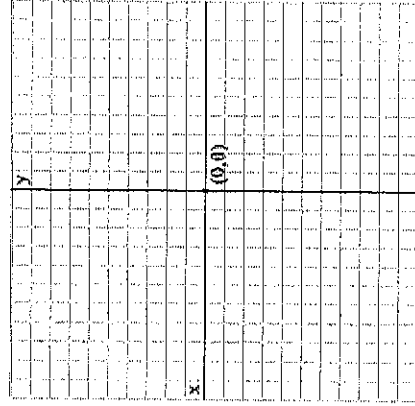
7. $Y = 2x + 7$ $m =$ $b =$



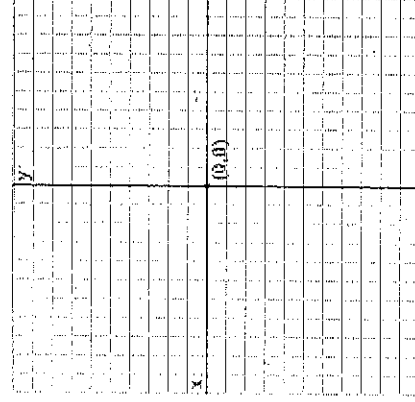
8. $3x + 4y = 12$ $m =$ $b =$



9. $(6, -1)$ $(6, 4)$ $m =$ $b =$



10. $4y + 4x = -8$ $m =$ $b =$



Sheet #3 – Radicals

Simplify each radical:

1. $\sqrt{8}$

2. $\sqrt{63}$

3. $4\sqrt{49}$

4. $-5\sqrt{28}$

5. $\sqrt{3}(5\sqrt{7})$

6. $\frac{-3\sqrt{12}}{\sqrt{3}}$

7. $2\sqrt{3} + 5\sqrt{3} - \sqrt{3}$

8. $6\sqrt{54} - 3\sqrt{24} - 2\sqrt{6}$

#4 – Polynomials:

Simplify

1. $3x^2 + 9x - 7x^2 + 12 - 16x$

2. $(3x - 4)(2x + 9)$

3. $(2x - 5)^2$

#5 - Arithmetic

Compute- don't forget PEMDAS!!

1. $3 - 2 + 8$

5. $4(6 - 2)$

9. $5 - 2(1 + 6)$

2. $3^2 + 6 - 2$

6. $5 - (4 - 7)^2$

10. $9 \div 3 + 6^2(\frac{1}{2})$

3. $\frac{1}{3} + \frac{5}{3}$

7. $\frac{5}{2} - \frac{7}{4}$

11. $\frac{2}{7} + \frac{5}{8}$

4. $2 \times \frac{5}{6}$

8. $\frac{2}{7} \times \frac{6}{5}$

12. $\frac{4}{7} \div \frac{5}{3}$