

Westerly High School  
Math Department  
Summer Packet  
for students  
entering  
Geometry  
Summer 2014

**Note:** Enclosed students will find review material to complete over the summer. As with reading, continued math over the summer will help to keep you updated and ready to go onto your next course with your best abilities. Released NECAP items are also attached. Please show your work and return the completed packet to your teacher on the first day of class. A test will be given pertaining to the review material within the first week of class.

**Note:** for help with topics please review at the following websites:

Go to: [my.hrw.com](http://my.hrw.com)

User name: bulldog63

Password: m8s5p

Click: Holt Mcdougal – go to online textbook

Go to: [www.khanacademy.org](http://www.khanacademy.org)

Geometry Summer Packet 2012

Short Answer

1. Divide.  $0$   
 $0 \div 5.928$
2. Divide. undefined  
 $-58.8 \div 0$
3. Simplify  $9^3$ .  $729$
4. Simplify  $-7^2$ .  $-49$
5. Simplify  $-10^2$ .  $-100$
6. Simplify  $(-3)^4$ .  $81$
7. Simplify  $(-7)^3$ .  $-343$
8. Simplify  $(\frac{5}{6})^2$ .  $\frac{25}{36}$
9. Find the square root.  
 $\sqrt{196}$   $14$
10. Find the square root.  
 $\sqrt{100}$   $10$
11. Find the square root.  
 $\sqrt{169}$   $13$
12. Find the square root.  
 $\sqrt{121}$   $11$
13. Find the square root.  
 $-\sqrt{81}$   $-9$
14. Simplify  $8 + 3[3 - (1)^6]$ .  $14$
15. Simplify  $3^4 + 12 + 3 - (1 - 9)$ .  $93$   
 $81 + 12 + 3 - (-8)$

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16. Solve  $44 = 14 - 2a$ .  $a = -15$

17. Solve  $33 = 17 - 2y$ .  $y = -8$

18. Solve  $\frac{f}{45} - \frac{2}{9} = \frac{2}{9}$ .  $f = 20$

19. Solve  $43a + 10 - 26a = 27$ .  $a = 1$

20. Solve  $33d + 13 - 30d = 46$ .  $d = 11$

21. Solve  $50q - 43 = 52q - 81$ .  $q = 19$

22. Solve  $49p - 33 = 57p - 89$ .  $p = 7$

23. Solve  $n - 8 + n = 1 - 4n$ .  $n = \frac{3}{2}$

24. Solve  $-3y + 3 - 2y = -1 + y$ .  $y = \frac{2}{3}$

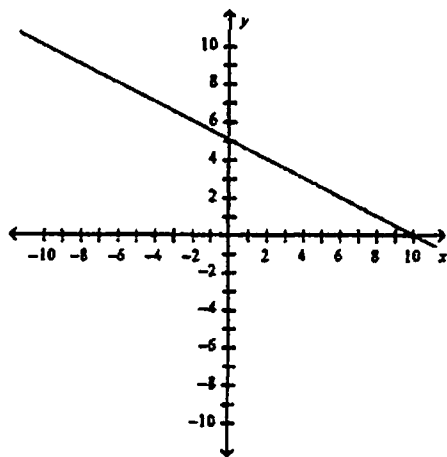
25. The formula for the resistance of a conductor with voltage  $V$  and current  $I$  is  $r = \frac{V}{I}$ . Solve for  $V$ .  $V = rI$

26. Solve  $4x - z = y$  for  $x$ .  $x = \frac{y+z}{4}$

27. Solve the proportion  $\frac{5}{6} = \frac{x}{30}$ .  $x = 25$

28. Solve the proportion  $\frac{3}{8} = \frac{x}{72}$ .  $x = 27$

29. Find the x- and y-intercepts.



x-intercept:  $(10, 0)$

y-intercept:  $(0, 5)$

30. Find the x- and y-intercepts of  $2x - 4y = -12$ . x-int:  $(-6, 0)$  y-int:  $(0, 3)$

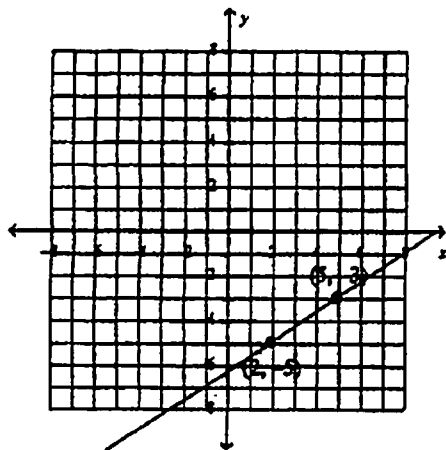
31. Find the x- and y-intercepts of  $-2x - y = 2$ . x-int:  $(-1, 0)$  y-int:  $(0, -2)$

32. Use intercepts to graph the line described by the equation  $3x + 2y = 6$ . x-int:  $(2, 0)$  y-int:  $(0, 3)$

33. Use intercepts to graph the line described by the equation  $-2x - 4y = 4$ .

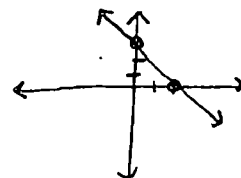
x-int:  $(-2, 0)$  y-int:  $(0, -1)$

34. Find the slope of the line.

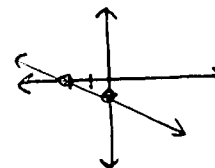


$$m = \frac{2}{3}$$

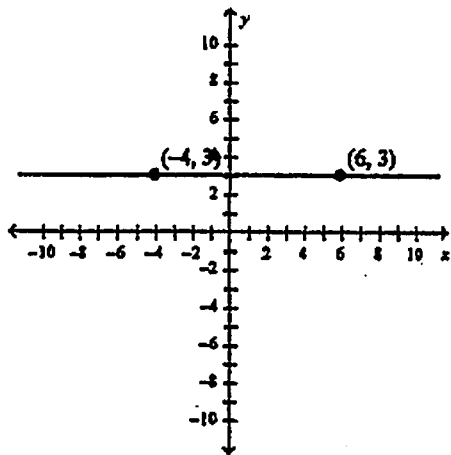
(32)



(33)

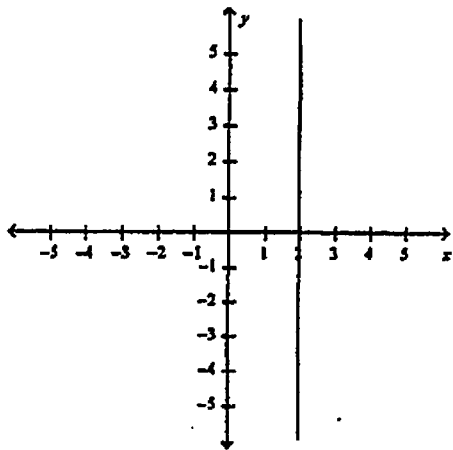


35. Find the slope of the line.



$$m = 0$$

36. Tell whether the slope of the line is positive, negative, zero, or undefined.



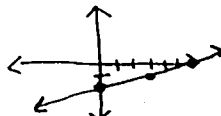
$$m = \text{undefined}$$

37. Find the slope of the line that contains (1, 6) and (10, -9).  $m = \frac{-5}{3}$

38. Find the slope of the line that contains (-10, 0) and (-2, -4).  $m = -\frac{1}{2}$

39. Find the slope of the line described by  $x - 3y = -6$ .  $m = \frac{1}{3}$

40. Graph the line with the slope  $\frac{1}{3}$  and  $y$ -intercept -2.



41. Write the equation that describes the line with slope = 2 and  $y$ -intercept =  $\frac{3}{2}$  in slope-intercept form.

$$y = 2x + \frac{3}{2}$$

42. Write the equation  $4x + 8y = -24$  in slope-intercept form. Then graph the line described by the equation.

$$y = -\frac{1}{2}x - 3$$

43. Solve  $\begin{cases} 3x + y = -3 \\ y = x + 5 \end{cases}$  by using substitution. Express your answer as an ordered pair.

$$(-2, 3)$$

44. Solve  $\begin{cases} 4x - 4y = -16 \\ x - 2y = -12 \end{cases}$  by using substitution. Express your answer as an ordered pair.

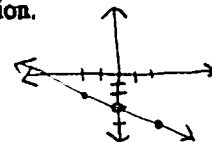
$$(4, 8)$$

45. Solve  $\begin{cases} 3x - 6y = 12 \\ 2x + 6y = -12 \end{cases}$  by using elimination. Express your answer as an ordered pair.

$$(0, -2)$$

46. Solve  $\begin{cases} 2x - 5y = -7 \\ 5x - 3y = 11 \end{cases}$  by using elimination. Express your answer as an ordered pair.

$$(4, 3)$$



47. Multiply.  
 $(n-5)(n-1) \quad n^2 - 6n + 5$
48. Multiply.  
 $(n+2)(n+4) \quad n^2 + 6n + 8$
49. Multiply.  
 $(z+3)(z-2) \quad z^2 + z - 6.$
50. Multiply.  
 $(x+4)(x+2) \quad x^2 + 6x + 8$
51. Multiply.  
 $(p-8)^2 \quad p^2 - 16p + 64$
52. Multiply.  
 $(x-4)^2 \quad x^2 - 8x + 16$
53. Multiply.  
 $(r+7)(r-7) \quad r^2 - 49$
54. Multiply.  
 $(q+6)(q-6) \quad q^2 - 36$
55. Factor  $x^2 + 101x + 100$ .  $(x+100)(x+1)$
56. Factor the trinomial  $a^2 + 14a + 48$ .  $(a+6)(a+8)$
57. Factor the trinomial  $r^2 + r - 20$ .  $(r+5)(r-4)$
58. Factor the trinomial  $p^2 + 3p - 18$ .  $(p+6)(p-3)$
59. Factor  $3x^2 + 2x - 8$ .  $(3x-4)(x+2)$

60. Solve the quadratic equation  $x^2 + 2x - 8 = 0$  by factoring.  $x = -4, x = 2$
61. Solve the quadratic equation  $b^2 - 2b - 8 = 0$  by factoring.  $b = 4, b = -2$
62. Solve  $x^2 = 16$  by using square roots.  $x = \pm 4$
63. Solve  $x^2 = 36$  by using square roots.  $x = \pm 6$
64. Solve  $x^2 = -9$  by using square roots. no real solution
65. Solve  $x^2 - 10 = 0$ . If necessary, round to the nearest hundredth.  $x = \pm\sqrt{10} \approx \pm 3.16$
66. Solve  $x^2 - 20 = 0$ . If necessary, round to the nearest hundredth.  $x = \pm\sqrt{20} \approx \pm 4.47$
67. Solve  $3x^2 - 6x + 1 = 0$  by using the Quadratic Formula. If necessary, round to the nearest hundredth.  $x = \frac{1 \pm \sqrt{6}}{3}$
68. Solve  $3x^2 + x - 1 = 0$  by using the Quadratic Formula. If necessary, round to the nearest hundredth.  $x = \frac{-1 \pm \sqrt{13}}{6}$
69. Solve  $c^2 + 10c + 16 = 0$ .  $c = -8, c = -2$
70. Solve  $z^2 + 13z + 30 = 0$ .  $z = -3, z = -10$