

Name: \_\_\_\_\_ Class: \_\_\_\_\_ Date: \_\_\_\_\_

## Honors Geometry Summer Review Packet

1. Find the GCF of the terms of the polynomial.

$$8x^6 + 32x^3$$

**Simplify the product using FOIL.**

2.  $(3x - 7)(3x - 5)$

3.  $(4x + 3)(2x + 5)$

**Simplify the product using distributive property.**

4.  $(5h - 5)(5h - 6)$

**Find the square.**

5.  $(2x - 6)^2$

6.  $(8m + 7)^2$

7. Solve the equation by using square roots.

$$x^2 - 20 = -4$$

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**Factor the expression.**

8.  $w^2 + 18w + 77$

9.  $d^2 + 10d + 9$

10.  $k^2 + kf - 2f^2$

11.  $x^2 - 10xy + 24y^2$

12.  $2x^3 - 4x^2 - 8x$

13.  $40w^{11} + 16w^6$

**Simplify the radical expression. All variables represent positive numbers.**

14.  $\sqrt{1.69}$

15.  $\sqrt{\frac{144}{49}}$

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16.  $-\sqrt{2500}$

17.  $-4\sqrt{160}$

18.  $\sqrt{144}$

19.  $-3\sqrt{180h^4}$

20.  $-2\sqrt{2p} \cdot 2\sqrt{22}$

21.  $\sqrt{\frac{10}{81}}$

22.  $\sqrt{\frac{80w^3}{9}}$

23.  $\sqrt{\frac{400}{5}}$

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24.  $\sqrt{\frac{63x^{15}y^9}{7xy^{11}}}$

25.  $\frac{4}{\sqrt{21}}$

26.  $\frac{-\sqrt{100}}{\sqrt{500}}$

27.  $\sqrt{6} + 2\sqrt{6}$

28.  $4\sqrt{7} + 8\sqrt{63}$

29.  $(6 - \sqrt{11})(6 + \sqrt{11})$

30.  $\sqrt{39}(\sqrt{6} + 7)$

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31.  $\frac{3}{4+4\sqrt{5}}$

32.  $\frac{5}{-5-3\sqrt{3}}$

33.  $\frac{2+5\sqrt{3}}{-4+4\sqrt{2}}$

34.  $\frac{4\sqrt{6}}{\sqrt{30}}$

35.  $(2\sqrt{5} + 3\sqrt{7})^2$

36. Find the number of real number solutions for the equation.  
 $x^2 - 18 = 0$

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37. A square garden plot has an area of  $24 \text{ ft}^2$ .  
A. Find the length of each side in simplest radical form.

B. Calculate the length of each side to the nearest tenth of a foot.

**Solve the equation using the zero-product property.**

38.  $(2x - 2)(5x - 5) = 0$

39.  $-8n(10n - 1) = 0$

**Solve the equation by factoring.**

40.  $x^2 - 6x - 27 = 0$

41.  $3x^2 - 3x - 6 = 0$

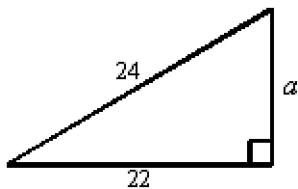
42.  $3x^2 - 27 = 0$

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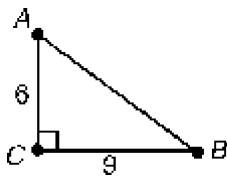
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43.  $15 = 8x^2 - 14x$

44. Find the length of the leg of this right triangle. Give an approximation to 3 decimal places.



45.  $\triangle ABC$  is a right triangle.  $AB = \underline{\hspace{2cm}}$ .



**Determine whether the given lengths can be sides of a right triangle.**

46. 18m, 24m, 30m

47. 7m, 40m, 41m

**Find the slope of the line given the following points.**

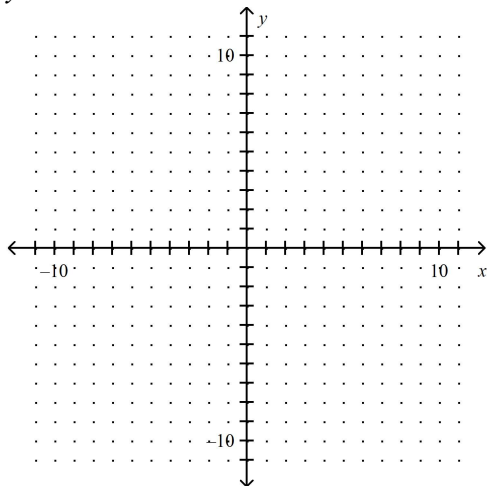
48.  $A(-3,-2)$ ,  $B(-1,2)$

49. C(-4,0), D(0,-1)

50. Find the equation of the line passing through the points J(-5,-4), K(0,-2) in slope intercept form.

51. Find the equation of the line, in slope intercept form, that passes through the given point and is parallel to the given equation.  $(-5,-4)$   $y = \frac{1}{2}x + 1$ 52. Find the equation of the line, in slope intercept form, that passes through the given point and is perpendicular to the given equation.  $(-3,1)$   $y = -3x + 7$ **Identify the x-intercept and the y-intercept and graph.**

53.  $y = 2x - 2$

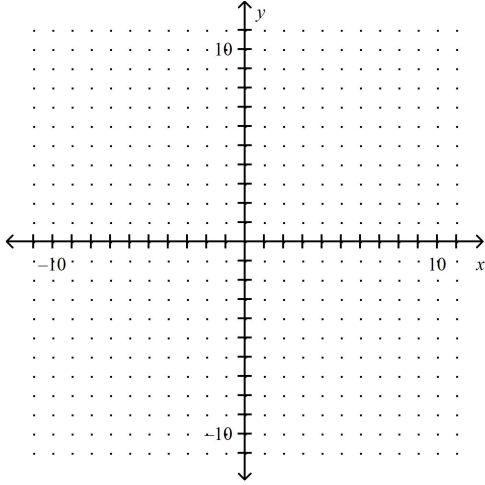




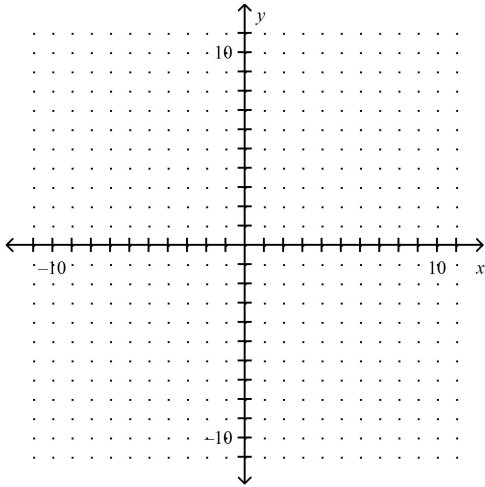
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54.  $\frac{1}{2}x + y = 3$

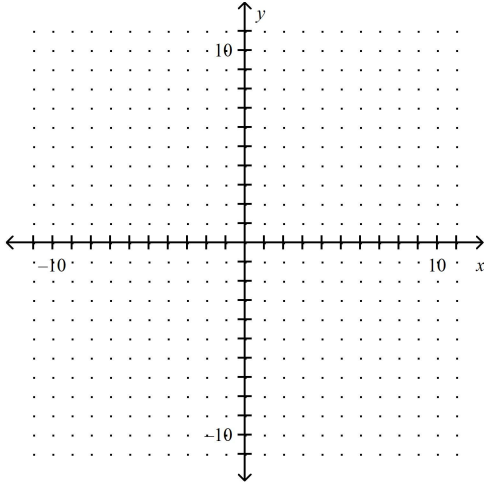


55.  $-\frac{1}{2}y = x + 1$

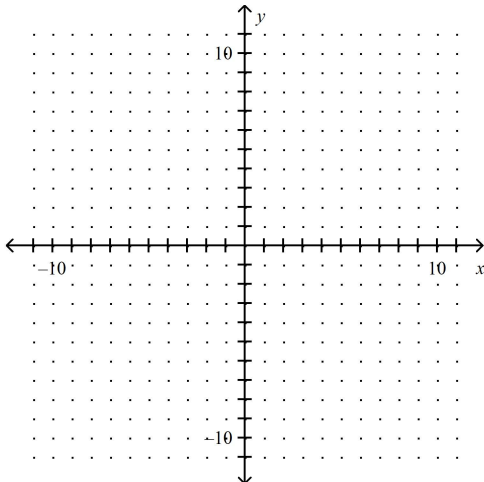


Graph the equation of the line using the slope and y-intercept.

56.  $y = 3x - 2$



57.  $y = -\frac{1}{2}x + 4$

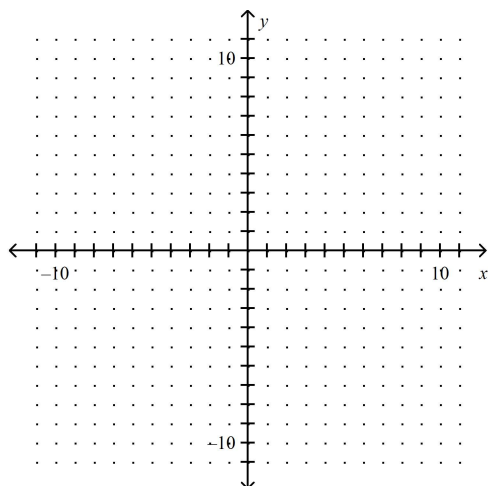


**Honors Geometry Summer Review Packet  
Answer Section**

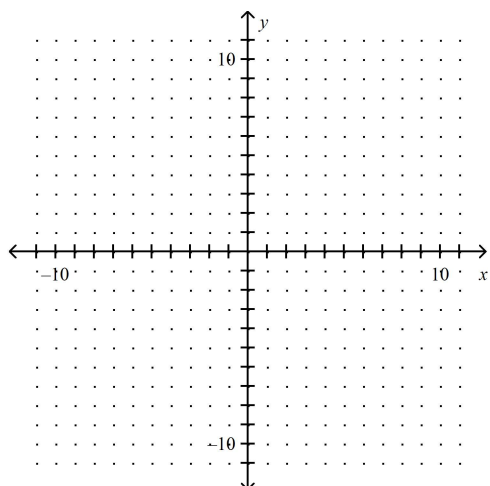
1.  $8x^3$
2.  $9x^2 - 36x + 35$
3.  $8x^2 + 26x + 15$
4.  $5h^2 - 55h + 30$
5.  $4x^2 - 24x + 36$
6.  $64x^2 + 112x + 49$
7.  $x = \pm 4$
8.  $(w + 7)(w + 11)$
9.  $(d + 9)(d + 1)$
10.  $(k + 2f)(k - f)$
11.  $(x - 6y)(x - 4y)$
12.  $2x(x^2 - 2x - 4)$
13.  $8w^6(5w^5 + 2)$
14. 1.3
15.  $\frac{12}{7}$
16. -50
17.  $-16\sqrt{10}$
18. 12
19.  $-18h^2\sqrt{5}$
20.  $-8\sqrt{11p}$
21.  $\frac{\sqrt{10}}{9}$
22.  $\frac{4w\sqrt{5w}}{3}$
23.  $4\sqrt{5}$
24.  $\frac{3x^7}{y}$
25.  $\frac{4\sqrt{21}}{21}$
26.  $\frac{-\sqrt{5}}{5}$
27.  $3\sqrt{6}$
28.  $31\sqrt{7}$
29. 25
30.  $3\sqrt{26} + 7\sqrt{39}$

31.  $\frac{12 - 12\sqrt{5}}{-64}$
32.  $\frac{3 - 3\sqrt{5}}{-16}$
33.  $\frac{-2 - 2\sqrt{2} - 5\sqrt{3} - 5\sqrt{6}}{-4}$
34.  $\frac{4\sqrt{5}}{5}$
35.  $83 + 12\sqrt{35}$
36. 1 real solution
37. **A.**  $2\sqrt{6}$  ft  
**B.** 4.9 ft
38.  $x = 1$
39.  $n = 0, \frac{1}{10}$
40.  $x = 9, -3$
41.  $x = 2, -1$
42.  $x = 3, -3$
43.  $x = \frac{5}{2}, \frac{-3}{4}$
44. 9.592
45.  $3\sqrt{13}$
46. yes
47. no
48.  $m = 2$
49.  $m = -\frac{1}{4}$
50.  $y = \frac{2}{5}x - 2$
51.  $y = \frac{1}{2}x - \frac{3}{2}$
52.  $y = \frac{1}{3}x + 2$

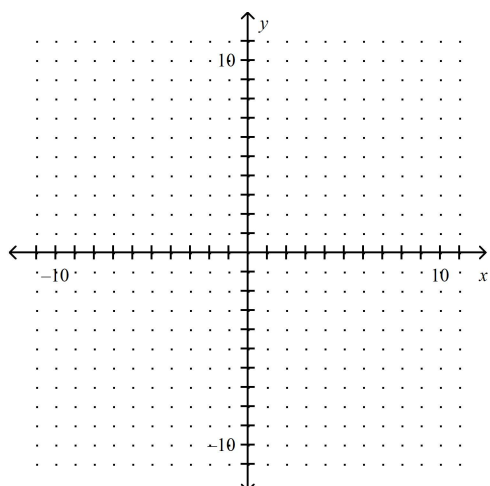
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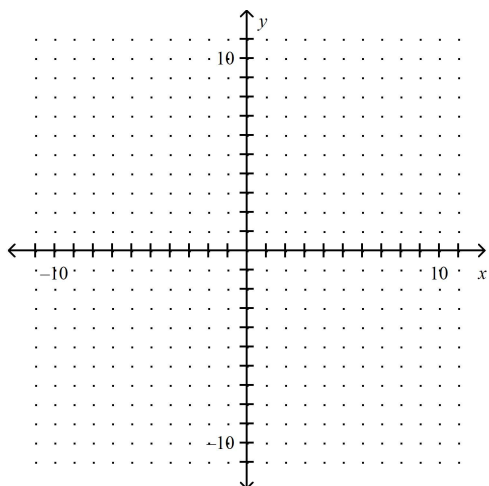
54.



55.



56.



57.

