Name: _____

Anchor Bay High School

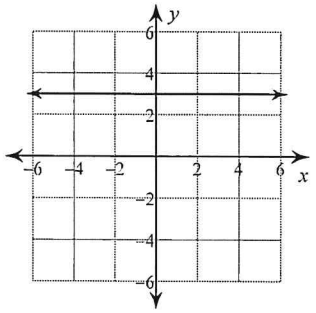
Honors Geometry

Summer Review Packet

It is suggested that you complete the all of the exercises. Please *show all work* on lined paper - box your final answers. All answers are located in the back of the packet. There will be a test over these topics the first week of class.

Answers to Summer Algebra 1 Review (ID: 1)

1) $2\sqrt{41}$
2) $\sqrt{17}$
3) $\sqrt{73}$
4) $2\sqrt{19}$
5) $3\sqrt{13}$
6) $\left\{-\frac{9}{4}\right\}$
7) $\left\{-\frac{5}{2}\right\}$
8) $\left\{-\frac{14}{3}\right\}$
9) $\left\{\frac{9}{2}\right\}$
10) $\{20.25\}$
11) $\{1.77\}$
12) $\{12.25\}$
13) $\{15\}$
14) $\{-3\}$
15) $\{0.06\}$
16) $m(m-3)$
17) $6(x-6)(x+3)$
18) $(7b+3)(b+5)$
19) $m(3m-4)$
20) $\{2, -7\}$
21) $\{4, -1.5\}$
22) $\{1, -3.5\}$
23) $\{1.25, -1\}$
24)



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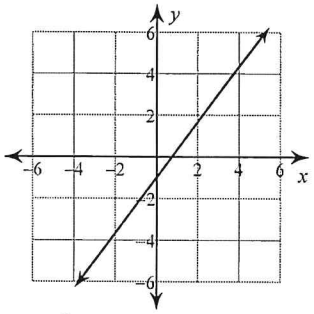

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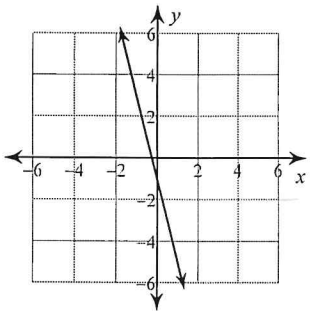

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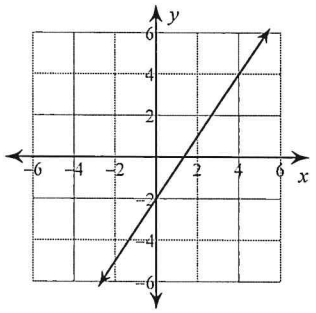
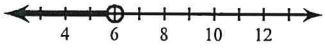
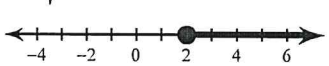


28) $r < 6$:



29) $m \geq 2$:



30) -4
31) 3
32) 0
33) $-\frac{4}{7}$
34) $y = -2x$
35) $y = x + 2$
36) $y = -\frac{2}{3}x + \frac{11}{3}$
37) $y = -3x - 8$
38) $y = 2x - 2$
39) $y = \frac{3}{2}x - 3$
40) $\left(2, -4\frac{1}{2}\right)$
41) $\left(7, -7\frac{1}{2}\right)$
42) $2\sqrt{2} - 4\sqrt{3}$
43) $3\sqrt{2}$
44) $-6\sqrt{2}$
45) $3x\sqrt{6}$
46) $4\sqrt{3v}$
47) $21uv\sqrt{6v}$
48) $-21x\sqrt{3y}$
49) $\frac{\sqrt{5}}{2}$
50) $\frac{\sqrt{5}}{2}$
51) $2\sqrt{3}$
52) $5\sqrt{3} + 4\sqrt{15}$
53) $2\sqrt{2} + \sqrt{6} - 8\sqrt{3} - 12$
54) $(0, -6)$
55) $(0, 1)$
56) $(-6, -6)$
57) $(2, 7)$
58) $(-2, 5)$
59) $(4, 4)$
60) $(3, -1)$
61) $(6, 5)$
62) $-4n^4 + 9n^3 + 3n^2 + 7$
63) $-p^4 - 7p^3 - p^2 - 3$
64) 3m

Name_____

Summer Algebra 1 Review Please do all work on a seperate sheet of paper and box final answers.

Find the distance between each pair of points. Leave your answer in simpliest radical form where appropriate.

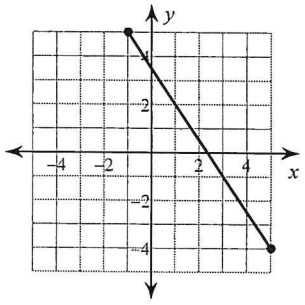
1) $(6, 6), (-4, -2)$

2) $(-8, -7), (-7, -3)$

3) $(3\sqrt{6}, 0), (\sqrt{6}, -7)$

4) $(3, -5\sqrt{2}), (5, \sqrt{2})$

5)



Solve each equation. Leave your answer as an improper fraction where appropriate.

6) $\frac{1}{2}p - \frac{3}{2}p = \frac{9}{4}$

7) $\frac{3}{2}x + \frac{7}{4}x = -\frac{65}{8}$

8) $-\frac{7}{2}\left(\frac{5}{2}x - \frac{7}{3}\right) = 49$

9) $-\frac{11}{3}\left(\frac{5}{2}k + \frac{1}{2}\right) = -\frac{517}{12}$

Solve each proportion. Leave your answer as an improper fraction where appropriate.

10) $\frac{m}{9} = \frac{9}{4}$

11) $\frac{4}{9} = \frac{n}{4}$

12) $\frac{r-7}{7} = \frac{6}{8}$

13) $\frac{10}{x+10} = \frac{4}{10}$

14) $\frac{b+6}{9} = \frac{b+7}{12}$

15) $\frac{x-10}{11x-4} = \frac{12}{4}$

Factor each completely.

16) $m^2 - 3m$

17) $6x^2 - 18x - 108$

18) $7b^2 + 38b + 15$

19) $3m^2 - 4m$

Solve each quadratic equation using any of the five (5) methods to solve. Round decimals to tenths place.

20) $p^2 + 5p - 14 = 0$

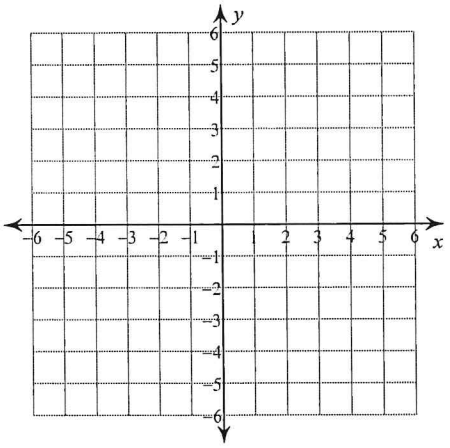
21) $2m^2 - 5m - 12 = 0$

22) $4n^2 - 14 = -10n$

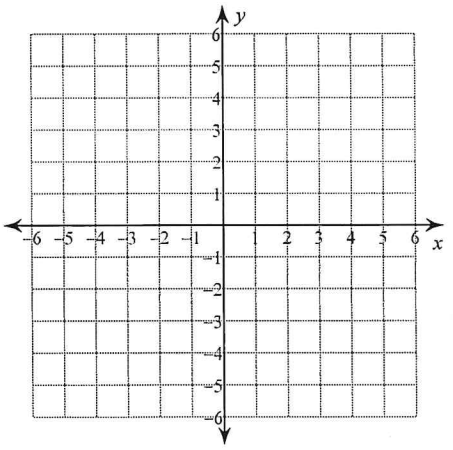
23) $4a^2 - a = 5$

Sketch the graph of each line. Be sure to label the y - intercept and one other point.

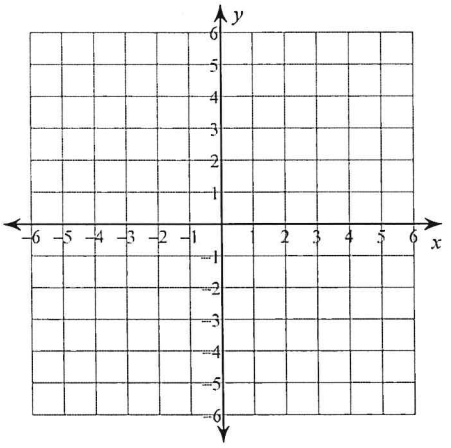
24) $y = 3$



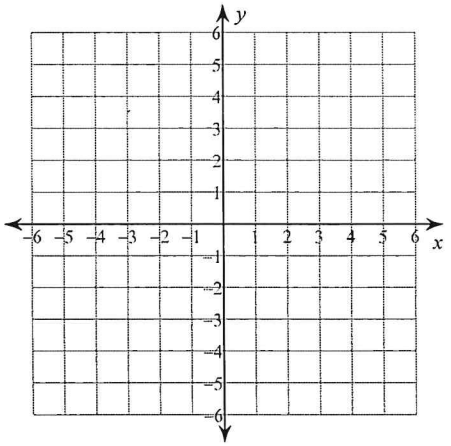
25) $y = \frac{4}{3}x - 1$



26) $4x + y = -1$

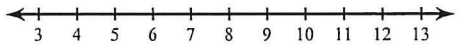


27) $3x - 2y = 4$

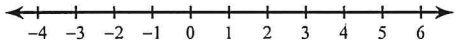


Solve each inequality and graph its solution.

28) $4(5r + 4) < 136$

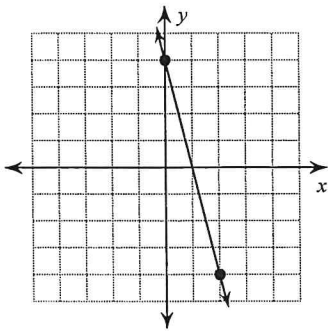


29) $-90 \geq -6(5m + 5)$



Find the slope of each line.

30)



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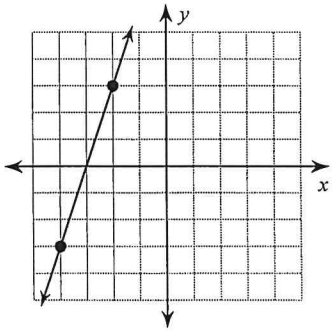


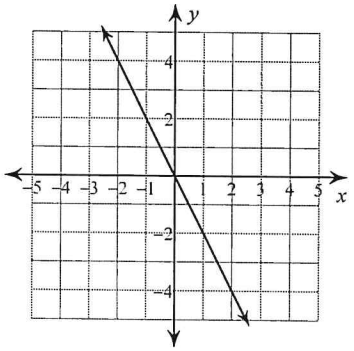
Find the slope of the line through each pair of points. Leave your answer as an improper fraction.

32) $(13, 19), (-10, 19)$

33) $(9, -2), (-19, 14)$

Write the slope-intercept form of the equation of each line.

34)



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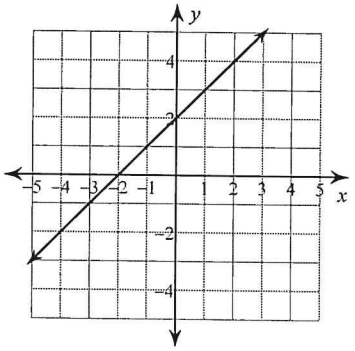

Write the slope-intercept form of the equation of the line through the given points.

36) through: $(4, 1)$ and $(-2, 5)$

37) through: $(-3, 1)$ and $(-2, -2)$

Write the slope-intercept form of the equation of the line described.

38) through: $(-1, -4)$, parallel to $y = 2x + 3$

39) through: $(2, 0)$, perp. to $y = -\frac{2}{3}x + 3$

Find the midpoint of the line segment with the given endpoints.

40) $(2, -6), (2, -3)$

41) $(6, -9), (8, -6)$

Simplify the following radical expressions. Remember the rules for "Simpliest Radical Form" apply.

42) $2\sqrt{2} - 2\sqrt{3} - 2\sqrt{3}$

43) $2\sqrt{2} + 2\sqrt{2} - \sqrt{2}$

44) $-\sqrt{2} - \sqrt{2} - 2\sqrt{8}$

45) $\sqrt{54x^2}$

46) $\sqrt{48v}$

47) $7\sqrt{54u^2v^3}$

48) $-7\sqrt{27x^2y}$

49) $\frac{\sqrt{15}}{\sqrt{12}}$

50) $\frac{4\sqrt{15}}{4\sqrt{12}}$

51) $\sqrt{6} \cdot \sqrt{2}$

52) $\sqrt{15}(\sqrt{5} + 4)$

53) $(\sqrt{2} - 4\sqrt{3})(\sqrt{4} + \sqrt{3})$

Solve each system by substitution. Remember to state your answer as an ordered pair.

54) $y = -2x - 6$
$y = 8x - 6$

55) $y = 7x + 1$
$-x + 8y = 8$

56) $-5x + y = 24$
$5x - 7y = 12$

57) $-8x + 4y = 12$
$-5x + y = -3$

Solve each system by elimination. Remember to state your answer as an ordered pair.

58) $2x - 3y = -19$
$2x + 6y = 26$

59) $-5x + 4y = -4$
$-5x + 2y = -12$

60) $9x + 16y = 11$
$2x + 8y = -2$

61) $3x - 5y = -7$
$7x - 9y = -3$

Simplify each sum. Be sure your answer is in standard form.

62) $(3n^3 - n^2 + 7) + (4n^2 - 4n^4 + 6n^3)$

For #63: Simplify each difference. Be sure your answer is in standard form.

63) $(6p^4 - p^3 - 3) - (7p^4 + p^2 + 6p^3)$

64) If the hypotenuse of a right triangle is 5 meters long, and one leg of the triangle is 4 meters long, what is the length of the third side?

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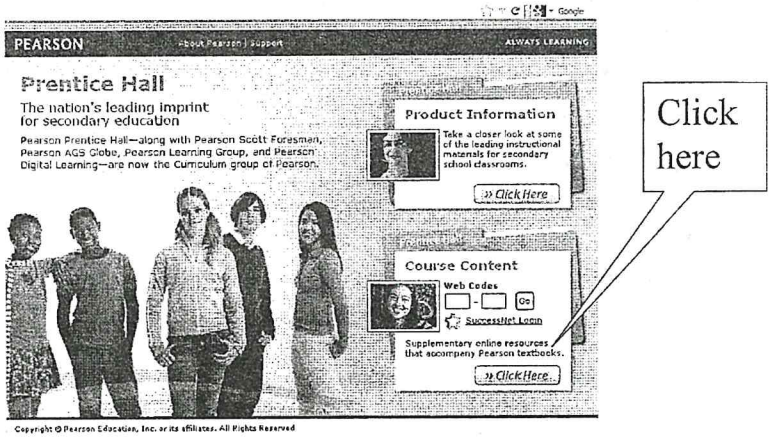
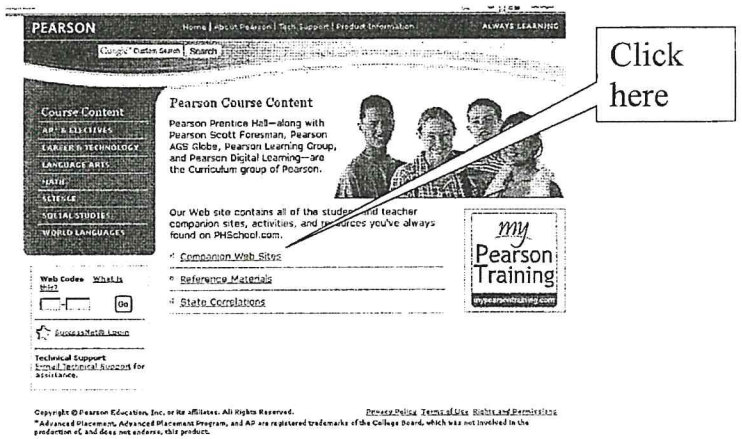


3. Choose "Companion WebSites"



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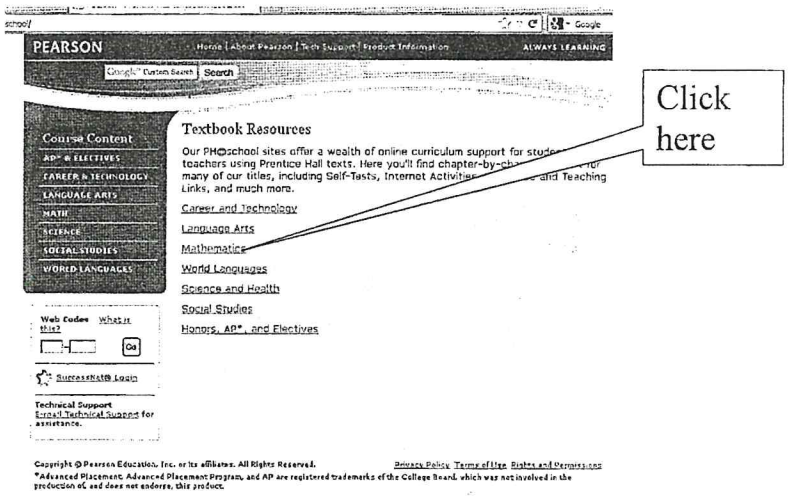

5. Choose: "2004 Edition Series"