Show all work
** on separate paper**

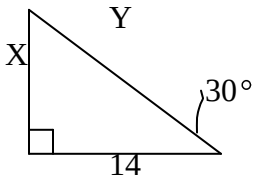
Honors Algebra II
Summer Packet 2010

Graph on a number line.

1 $-2 \le x+3<6$ D = { Reals

2. Convert 150 cubic centimeters per second to cubic feet per minute.

3. Find X and Y.



Solve:

4. $\begin{cases} 3x+2y-z=1 \\ x+y-z=-1 \\ 5x+2y+2z=8 \end{cases}$

Solve for x:

5. $\frac{h}{a+n}=g\left(\frac{y}{x}-d\right)$

Solve by completing the square.

6 $2x^2-5x-8=0$

Simplify:

7. $2a^2+5x-8-3(2a^2-3x+2)$

8. .Find the distance between

$(-6,5)$ *and* $(2,-1)$

9. Find the slope between $(2,-4)$ *and* $(-3,10)$.

.

Solve:

10. $\begin{cases} x^2+y^2=11 \\ y-x=1 \end{cases}$

Solve:

11. $\begin{cases} BT+9T=36 \\ BT-9T=18 \end{cases}$

Solve by using elimination:

12. $\begin{cases} 2x+y=6 \\ x-3y=2 \end{cases}$

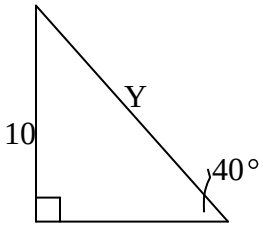
13. If $f(x)=x^2+3x-5$ an $f(x)=4x-5$, then find $(f+g)(2)$.

14. Add $-6/\underline{30°}$ *and* $15/\underline{-240°}$

Find the vector in rectangular form.

Find Y.

15.



Solve by completing the square.

16. $x^2+6x-8=0$

Solve by completing the square.

17. $2x^2-8x-3=0$

Solve:

18. $\begin{cases} \frac{1}{2}x+\frac{3}{5}y=\frac{-2}{5} \\ 0.06x-0.2y=1.04 \end{cases}$

19. Find three consecutive integers such that the product of the first and the third is 4 greater than four times the second.

Solve by factoring:

20. $2x^2 - 3x - 20 = 0$

21. The sum of two numbers is 136 and their difference is 50. What are the numbers ?

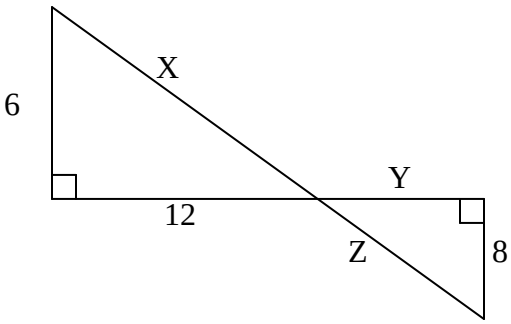
Simplify:

22. $8i^3 - 5i^4 + 2\sqrt{-25} + \sqrt{-5}\sqrt{-5}$

Solve by substitution:

23. $\begin{cases} 2x + 3y = 9 \\ x + 4y = 12 \end{cases}$

24. Find Z.



Solve by using the quadratic formula.

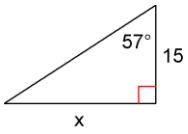
25. $3x^2 + 6 = -3x$

Solve:

26. $5 + \sqrt{3x - 4} = 9$

27. Four times the number of black marbles exceeded three times the number of yellow marbles by 17. Also, 6 times the number of black marbles was 2 less than 10 times the number of yellow marbles. How many of each were there?

28. Find x



Simplify:

29. $\dfrac{4\sqrt{2} - 3}{\sqrt{2} - 2}$

Simplify:

30. $\dfrac{-2 + \sqrt{2}}{3 + \sqrt{3}}$

Simplify:

31. Find Y.

$$\frac{x-5}{x^2 - 5x - 14} - \frac{3x}{7 - x}$$

Simplify:

32. $8i^3 - 5i^4 + (2i - 3)(i + 4)$

Solve:

33.

$$\log_6(x - 3) - \log_6 2 = \log_6(x + 1)$$

Simplify:

Solve:

34. $\begin{cases} \dfrac{1}{4}x - \dfrac{1}{5}y = 2 \\ 0.03x - 0.4y = -1.64 \end{cases}$

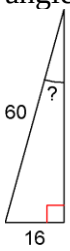
Simplify:

35. $\dfrac{2}{1-\sqrt{3}}$

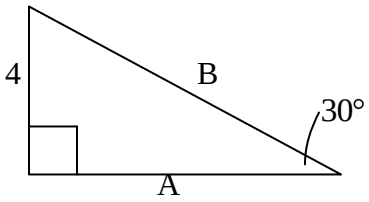
Simplify:

36. $5\sqrt{\dfrac{6}{11}}-7\sqrt{\dfrac{11}{6}}-\sqrt{594}$

37. Find the missing angle.



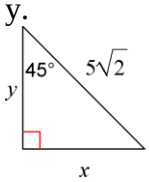
38. Find A and B.



Graph:

39. $\left\{\begin{matrix} y \le \dfrac{-1}{2}x+3 \\ y > 3x-1 \end{matrix}\right\}$

40. Find x and y.



41. Solve:

$x^2 = -5x+3$

Simplify:

42. $\dfrac{2i^3-5i^4}{i-2}$

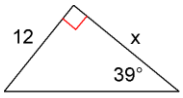
Solve:

43. $\left\{\begin{matrix} 6x-y=5 \\ xy=4 \end{matrix}\right\}$

Solve the system:

44. $\left\{\begin{matrix} x^2+y^2=10 \\ 3x^2-y^2=-2 \end{matrix}\right\}$

45. Find x.



Graph on a number line.

46. $-6 \le x-2 \gtrless 5; D =$ Re*als*

Graph:

47. $\left\{\begin{matrix} y < \dfrac{1}{2}x+2 \\ y \ge -x-3 \end{matrix}\right\}$

48. Find n.

$\dfrac{n-4}{7} = \dfrac{n+12}{3}$

Solve:

49. $\left\{\begin{matrix} x+2y+z=4 \\ 2x-y-z=0 \\ 2x-2y+z=1 \end{matrix}\right\}$

50. Simplify

$-2\sqrt{12}-3\sqrt{27}-3\sqrt{8}$

51. Find the discriminant and describe the types of solutions $-2x+3x^2=-8$

52. Write the equation of a line through (4,0) and perpendicular to $y=\frac{-4}{5}x+5$.

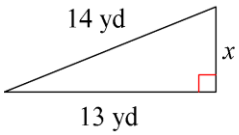
Solve:

53. $\left\{\begin{array}{c} 6x-y=5 \\ xy=4 \end{array}\right\}$

Solve:

54. $\left\{\begin{array}{l} x^2+y^2=10 \\ 3x^2-y^2=-2 \end{array}\right\}$

55. Solve for x.



Graph:

56. $y=(x-2)^2+4$

Solve by substitution:

57. $\left\{\begin{array}{l} 3x+2y=-3 \\ 4x-3y=13 \end{array}\right\}$

Simplify:

58. $-7\sqrt{6}\left(4\sqrt{12}+4\right)$

Graph

59. $y=x^2+8x+4$

Solve:

60. $0.003x+0.9=2.1$

61. What percent of 40 is 15?

Evaluate:

62. $ac^2(a^2-c)$ *if* $a=\frac{-1}{5}$ *and* $c=\frac{1}{2}$

63. Find n.

$$11(n-1)-4=-1+3(-10n+9)$$

64. If $f(x)=x^2+3x-5$, then find $f(3)$.

Factor:

65. $8x^3-27y^6$

Solve:

66. $\log_6(x-3)+\log_6 2=\log_6 24$

Solve:

67. $\sqrt{x-21}+3=\sqrt{x}$

Simplify:

68. $\frac{x^2+x-6}{x^3-4x^2-21x}\div\frac{x^2-4}{x^2+2x}$

Use the quadratic formula to solve:

69. $2x^2-3x+5=0$

Graph:

70. $4x+6y=24$