Show all work
** on separate paper**

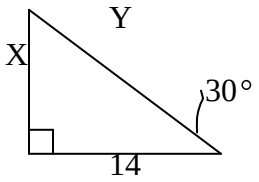
Honors Geometry
Summer Packet 2010

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

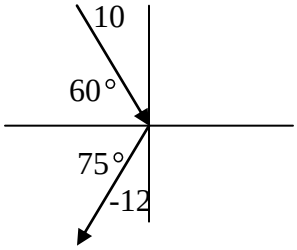
Solve:

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. Find the resultant force in polar form.(Be careful!!)

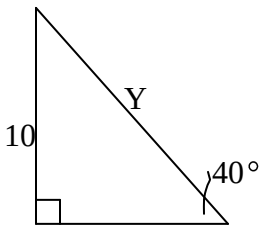


14. Add $-6 / \underline{30}°$ *and* $15 / \underline{-240}°$

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 ?

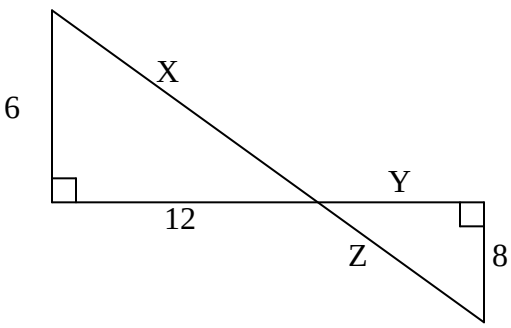
Simplify:

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.

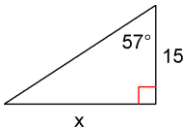
25. $3x^2+6=-3x$

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. $\frac{4\sqrt{2}-3}{\sqrt{2}-2}$

Simplify:

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

Simplify:

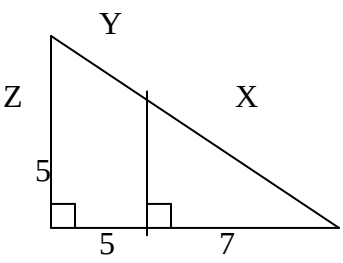
31. Find Y.

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

Simplify:

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

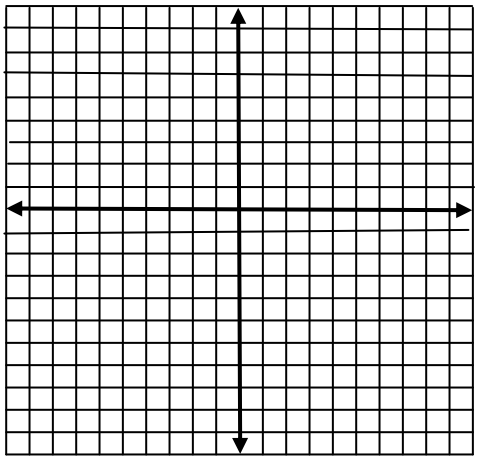
33. Find Y.



Simplify:

Solve:

34. $\left\{\begin{array}{c} \frac{1}{4}x-\frac{1}{5}y=2 \\ 0.03x-0.4y=-1.64 \end{array}\right\}$



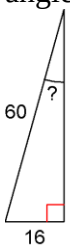
Simplify:

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

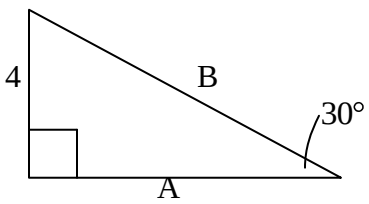
Simplify:

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

37. Find the missing angle.



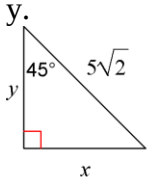
38. Find A and B.



Graph:

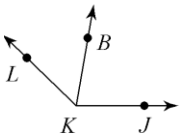
39. $\left\{\begin{array}{c} y \le \frac{-1}{2}x+3 \\ y > 3x-1 \end{array}\right\}$

40. Find x and y.



41. Solve:
$x^2 = -5x+3$

42.
Find $m\angle BKJ$ if $m\angle LKJ = 136°$ and $m\angle LKB = 56°$.



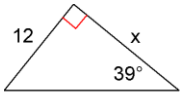
Solve:

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

Solve the system:

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

45. Find x.



Graph on a number line.

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

Graph:

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

48. Find n.

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

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 $y = \frac{-4}{5}x + 5$.

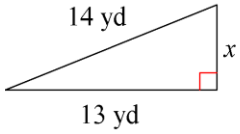
Solve:

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

Solve:

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

55. Solve for x.



Solve:

56. $\left\{\begin{matrix} x - 2y = 3 \\ xy = 6 \end{matrix}\right\}$

Solve by substitution:

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

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?

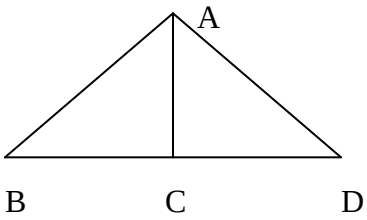
Evaluate:

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.



Given: $\overline{AB} \cong \overline{AD}$

$\overline{AC}$ $bi\sec ts$ $\angle BAD$

Prove: $\Delta BAC \cong \Delta DAC$

Factor:

65. $x^3 - y^6$

Solve:

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

Solve:

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

Simplify:

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

Use the quadratic formula to solve:

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

Graph:

70. $4x + 6y = 24$