Solve each of the following remembering order of operations:

1) $-5(6 - 10)$ x $-2 =$

2) $3^2 + 21 \div 3 =$

3) 2 x 1 x (-1) x $(-3)^2$ x (-1) x (1) x $(-2)^3 =$

4) $6^0 + 1^{10} + 18^1 + 2^{-2} =$

5) $-\left|-5\right|$ x $6 =$

Fraction and Decimal Maintenance. Put fraction solutions in lowest terms.

6) 4 2/9 + 3 7/18   7) 3 3/5 x 5 5/32

8) 12/25 $\div$ 44/125   9) 18 20/180 – 8 44/99

10) 15.809 + 2.08 + 0.0097 – 6.9   11) 56.9 x (-1.001)

12) 6.35 $\div$ 2.5   13) 1/8 $\div$ (-.0004)

Percent Review. Write each number as a percent.

14)   43/100   15)   0.57   16) 4/100   17)   7.8   18)   7/50

19)   0.02   20) 1 64/100   21)   0.025   22)   3/10   23)   8/5

Percent Calculations.

24) What is 28% of 74 ?   25) What percent of 40 is 320?   26) 24 is 36% of what number?

Rewrite the number in decimal notation.

27) 5.69 x 10^{11} 28) 1.92 x 10^6 29)   5.7 x 10^{-9}

Write each number in Scientific Notation

30) 0.000408   31) 780000000   32) 90500000000000

Solve. Place solutions in proper scientific notation.

33) $1.6 \times 10^{-3} + 3.5 \times 10^3$

34) $(2.1 \times 10^5)(1.2 \times 10^4)$

35) $(1.8 \times 10^{12}) \div (3.0 \times 10^{-2})$

Simplify the Expressions.

36) $2j(11 + j) - 4j - 5j$

37) $12p + 13d^2 - 8d - 3d^2 + 9p - 19d + 6$

38) $4x^2 \bullet (3x)^2$

39) $(4xy^{-1})(2x)$

40) $(3xy)^3 \div 6(xy)^2$

41) $\sqrt{100x^6y}$

42) $(\sqrt{27x})(\sqrt{3x})$
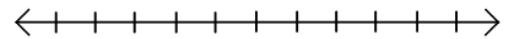

Solve the equations using the multi-step method.

43) $\dfrac{8 - 3b}{2} = 13$

44) $11 - \dfrac{k}{6} = -8$

45) $100g - 5(2 + 10g) + 25 = -85$

46) $4(3 - j) = 22 - 2(7j - 15)$

Write an inequality for the following statements. Graph the solution on the number line.
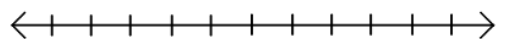
47) 10 more than twice a number is at least 30.

$\longleftarrow\!+\!+\!+\!+\!+\!+\!+\!+\!+\!+\!+\!+\!+\!\longrightarrow$

48) The product of a number and 7 is no more than 500.

$\longleftarrow\!+\!+\!+\!+\!+\!+\!+\!+\!+\!+\!+\!+\!+\!\longrightarrow$
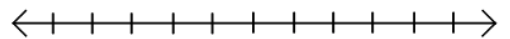
Graph the solutions for the following compound inequalities.

49) $2x \geq x + 4$ AND $4x < 3(x + 3)$

$\longleftarrow\!+\!+\!+\!+\!+\!+\!+\!+\!+\!+\!+\!+\!+\!\longrightarrow$

50) $6x < 2(x - 10)$ OR $x + 7 \leq 3$

$\longleftarrow\!+\!+\!+\!+\!+\!+\!+\!+\!+\!+\!+\!+\!+\!\longrightarrow$

Write the following linear equations in slope intercept form.
Identify: the slope, the y-intercept and the x-intercept.

51) $2x - 6y = 24$

52) $(y - 3) = 4(x + 2)$

53) $10x = 5y - 2$

Writing Linear Equations in slope intercept form:

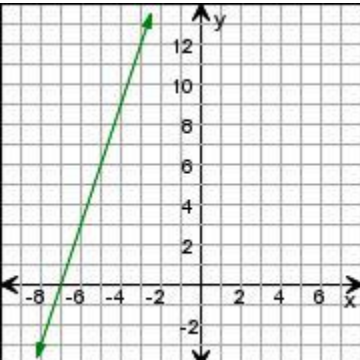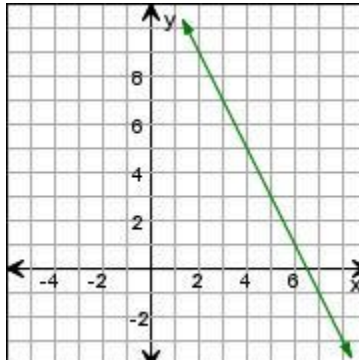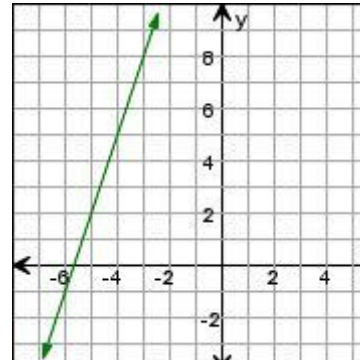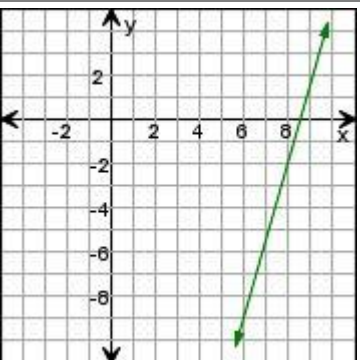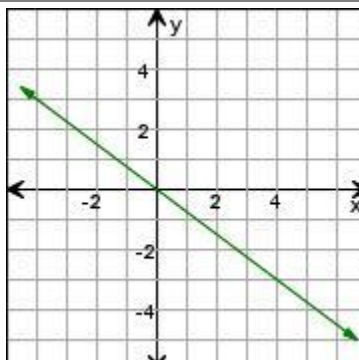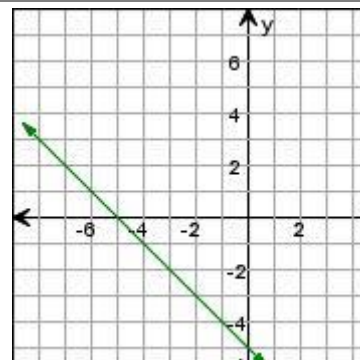54) A line with infinite slope and an x-interecpt of -4.

55) A line passing through (-2, -5) and (6, -1)

56) Write an equation of a line that passes through the point (8, 5)
     and is parallel to the following equation: $4x - 16y = 144$

57)   Write an equation of a line that passes through the point (-2, 3)
      and is perpendicular to the following equation: $y - 2x = 24$

Match the equation with its graph.

$\dfrac{-85}{3} = \dfrac{-5}{3}y + 5x$	$\dfrac{13}{2} = \dfrac{1}{2}y + 1x$	$-7x = -60 - 2y$
$\dfrac{x+y}{2} = \dfrac{-5}{2}$	$9x = 0 - 12y$	$-y = -21 - 3x$

58.	59.	60.
61.	62.	63.

Determine whether the following relationships are functions. Also determine whether they are linear.
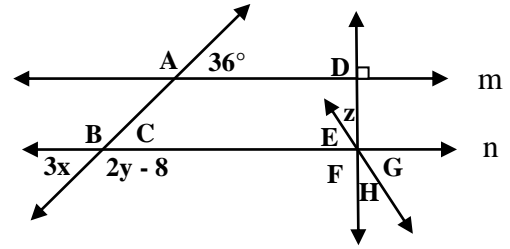
64)

x	-2	-1	0	1
y	3	3	3	3

65)

x	1	0	1	0
y	2	3	4	5

66)

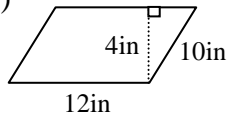| x	-2	-5	-8	-11
y	5	8	11	14

If m ∥ n, determine the following

67) List an angle supplementary to ∠ D

68) List an angle supplementary to ∠ A

69) List an angle complementary to ∠ H

70) An angle that corresponds to ∠ B

71) An angle the is vertical to ∠ G

72) The value of x

73) The value of y

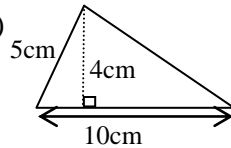74) The value of z if E = 63°

75) ∠C + ∠H =

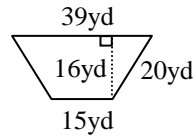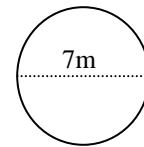**Find the Area and Perimeter or Circumference for each of the following:**
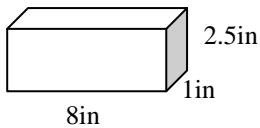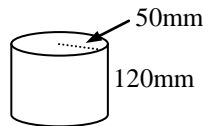
76-77)

78-79)
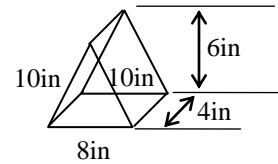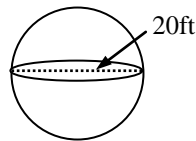
79-80)

81-82)

Find the Volume and Surface Area for each of the following:

83-84)

85-86)

87-88)

89-90)

91-92)