Palo Verde High School

333 PAVILION CENTER DRIVE LAS VEGAS, NV 89144 (702) 799-1450
FAX (702) 799-1455

Hello Future Algebra 2 Student,

Congratulations on making it through the 2016-2017 school year!

This letter is from the 2017-2018 Algebra 2 teachers. We look forward to working with you next year ☺ In order to help you succeed in Algebra 2, we wrote this review packet. We feel it will help prepare you for next year. It is a review packet of Algebra 1 and Geometry concepts.

Today, sign up for Remind.com by texting text**@geosummer to the number 81010.** You will receive a welcome text from Remind. (If you have trouble with 81010, you can try texting @geosummer to (702)830-7278.) Throughout the summer, you will receive reminders and answers. **This packet is due the first day of school.** Teachers will be answering questions and collecting it. We will also be testing on it during the first two weeks of the new school year.

We want to see you succeed next year. So, please do the packet yourself. Show your work. Check your answers. Do not copy the work or answers from somewhere else. Copying will not help prepare you for Algebra 2.

We are looking forward to great year with you next school year ☺ In the mean time, have a great summer...and do your own work! ☺

Palo Verde High School Algebra 2 Teachers

Pre-Algebra Name_____ ID: 1

2017 Geometry to Algebra 2 Summer Review Packet Date_____ Period____

Evaluate each expression.

1) $(-2.2) - 4.4$

2) $(-3.11) - (-3.8)$

3) $2.9 + (-7.2)$

4) $(-3.3) + 4.43$

5) $\left(-\frac{8}{7}\right) - \frac{4}{3} = \frac{-24}{21} + \frac{-28}{21}$

LCD = 21

$= \boxed{\frac{-52}{21}}$

6) $\left(-3\frac{2}{3}\right) - 4\frac{3}{4}$

7) $\left(-\frac{3}{2}\right) - 3\frac{1}{4}$

8) $\left(-\frac{9}{5}\right) - \left(-2\frac{2}{3}\right)$

9) $\frac{5}{6} + \left(-\frac{11}{7}\right)$

10) $1 + \left(-3\frac{3}{7}\right)$

11) $(-1) + 1\frac{2}{5} = \frac{-1}{1} + \frac{7}{5}$

LCD = 5

$= \frac{-5}{5} + \frac{7}{5}$

$= \boxed{\frac{2}{5}}$

12) $2 + \left(-1\frac{1}{2}\right)$

13) $6 - 7$

14) $3 + (-6)$

15) $(-8) - 1$

16) $(-6) + (-8)$

17) $(-1) - 2$

18) $4 - (-3)$

19) $1 - (-6)$

20) $(-1) - (-3)$

Simplify each expression. Combine like terms

21) $(a^3 - a^4) + (3a^4 + a^3)$

$-a^4 + 3a^4 + 1a^3 + 1a^3$

$\boxed{2a^4 + 2a^3}$

22) $(5b^4 - 5b) + (7b^4 + 6b)$

23) $(7x^4 + 5x^3) - (8x^4 + 6x^3)$ distribute negative

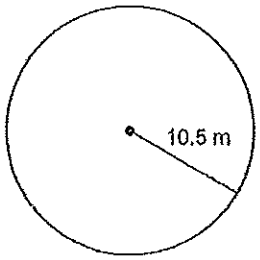
$7x^4 + 5x^3 - 8x^4 - 6x^3$

$=$ _____

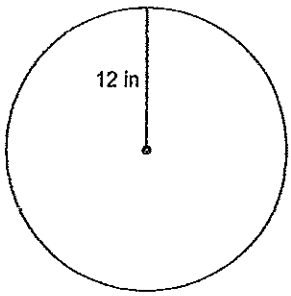
24) $(3 + 3k^2) - (k^2 - 8)$

Find the area of each. Round your answer to the nearest tenth. $A_0 = \pi r^2$

25)

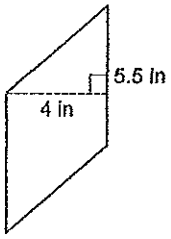


26)

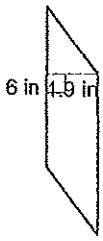


Find the area of each. $A = bh$

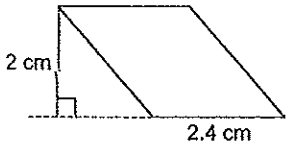
27)



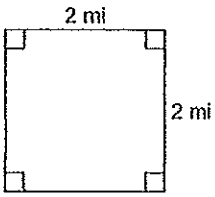
28)



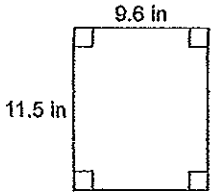
29)



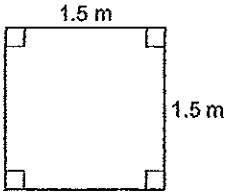
30)



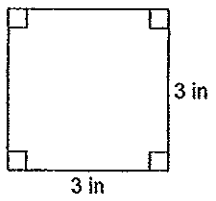
31)



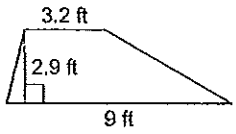
32)



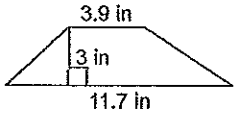
33)



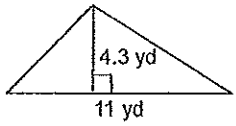
34) $A = \frac{1}{2}h(b_1 + b_2)$



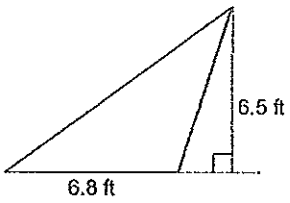
35)



36) $A = \frac{1}{2}bh$



37)



Simplify each expression.

38) $-r + 3(-8 - 3r)$ distribute 3

$= -r - 24 - 9r$ combine like terms

$= \boxed{-10r - 24}$

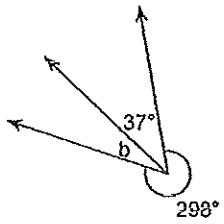
39) $3 + 5(x + 6)$

40) $-5n(n + 8) - 5(n - 5)$

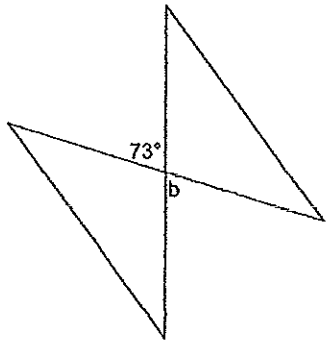
41) $7(6r - 8) - 5(r + 5)$

Find the measure of angle b.

42)



43)



Evaluate each using the values given.

44) $6-(c+b)$; use $b=3$, and $c=1$

$6-(1+3)$

$6-4=2$

45) $x-(y-4)$; use $x=4$, and $y=6$

46) $y+x-4$; use $x=1$, and $y=6$

47) $x-y+2$; use $x=4$, and $y=4$

Solve each equation. Isolate the varrable

48) $-6=n+12$

$-12 \quad -12$

$-18=n$

49) $-25=k-5$

50) $\frac{v}{2}+8=17$

51) $11-3x=47$

52) $-5(1+2x)=-85$

$-5-10x=-85$

$+5 \quad +5$

$-10x=-90$

$-10 \quad -10$

$x=8$

53) $-189=-7(3x+3)$

54) $-8(n+6) = -3n - 38$

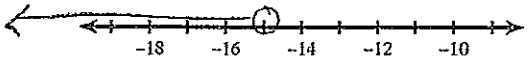
55) $21 - 6n = -5(n-4) - 6$

56) $2n + 4 = -2(-6 - 3n)$

57) $7v + 40 = -6(1 - 4v) + 6v$

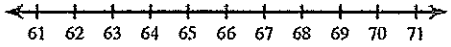
Solve each inequality and graph its solution. Isolate X

58) $-7 + x < -22$

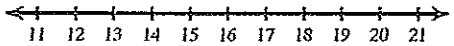


$-7 + X < -22$
$+7 \qquad +7$
$X < -15$

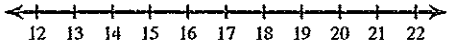
59) $8 \le \frac{x}{8}$



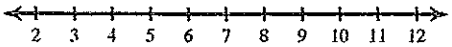
60) $-155 > 7 - 9x$



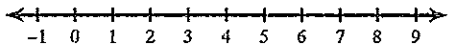
61) $1 \le \frac{v-3}{15}$



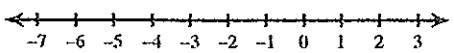
62) $-112 \ge -7 + 3(-6x - 5)$



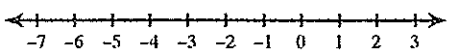
63) $-273 < 7(3 - 7n)$



64) $-7r \ge 5(1 - 3r) + 3r$

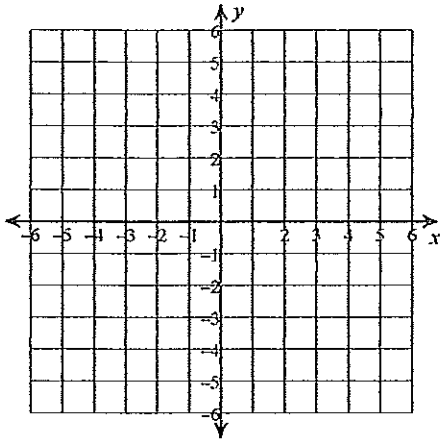


65) $-37 + 7m \le -6m - 3(7 - 7m)$



Sketch the graph of each line. $y = mx + b$

66) $y = -x$

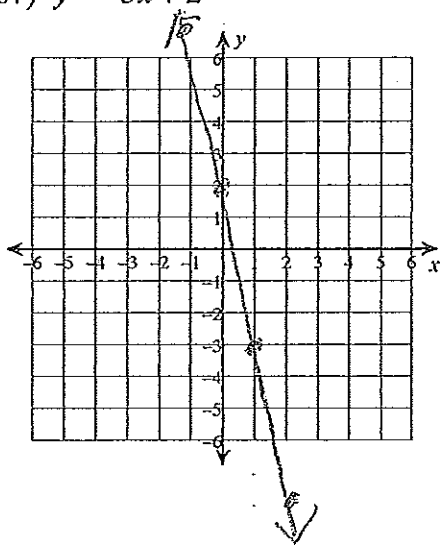


67) $y = -5x + 2$

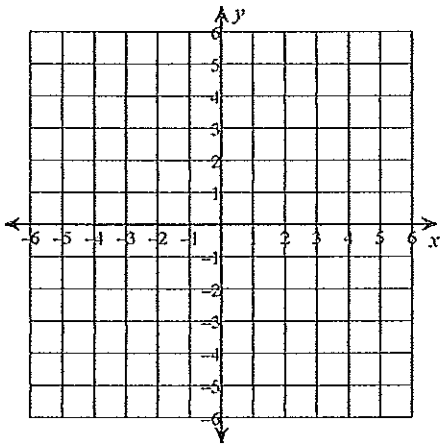
$m = \frac{-5}{1}$ down right

$b = 2$

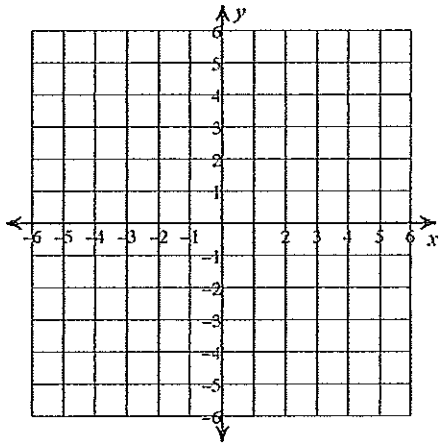
start



68) $y = -\frac{1}{2}x - 3$

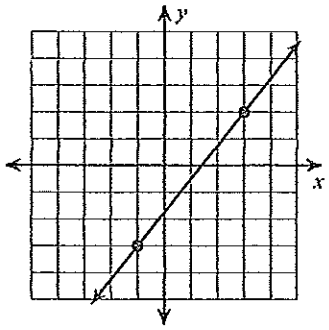


69) $y = -\frac{5}{2}x$

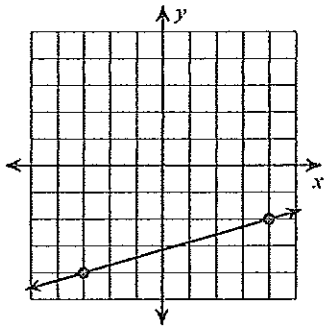


Find the slope of each line. $m = \frac{y_2 - y_1}{x_2 - x_1}$

70)

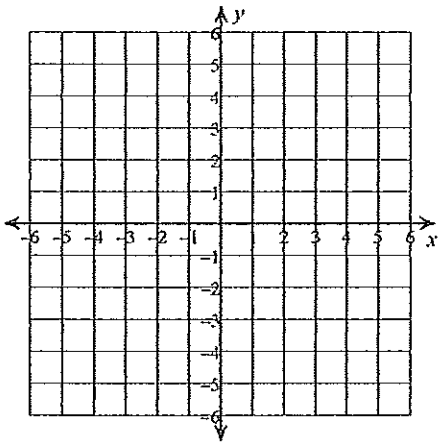


71)

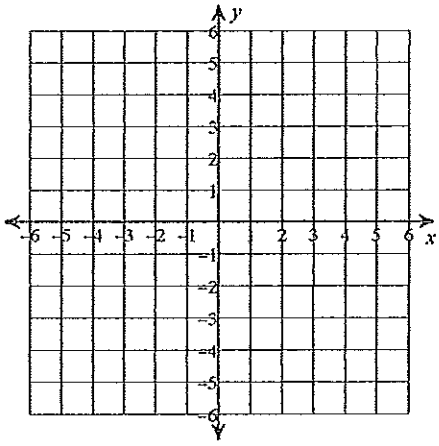


Sketch the graph of each linear inequality. Shade

72) $y \geq -x$



73) $y > -\frac{4}{5}x + 1$



Find each product.

① Change improper fractions

② multiply across

74) $-\frac{4}{3} \times \frac{4}{5}$

75) $-2\frac{3}{10} \times \frac{11}{9}$

$-\frac{23}{10} \cdot \frac{11}{9} = \boxed{\frac{-253}{90}}$

76) $-\frac{9}{5} \times -\frac{9}{8}$

77) $4\frac{5}{6} \times -\frac{8}{9}$

Find each quotient. Multiply by reciprocal of 2nd fraction

78) $\frac{-4}{3} \div \frac{4}{3}$

$\frac{-4}{3} \cdot \frac{3}{4} = \boxed{-1}$

79) $-1 \div \frac{8}{5}$

80) $5\frac{7}{9} \div -2$

81) $2\frac{2}{5} \div \frac{-11}{9}$

Simplify. Your answer should contain only positive exponents.

82) $4v^3 \cdot v^2$ $= \boxed{4v^5}$

83) $7r \cdot 8r$

84) $5v^4 \cdot 5v^2$

85) $7kk^4$

86) $\frac{4b^4}{4b^1} = \boxed{b^3}$

87) $\frac{7k}{5k^3}$

88) $\frac{8m}{5m}$

89) $\frac{6n^3}{n}$

90) $(7x)^4$ $= 7^4x^4$
$= 2401x^4$

91) $(x^3)^4$

92) $(5k^2)^3$

93) $(5n)^2$

94) $\frac{3p^2}{6p^3 \cdot 2p^4}$ $= \frac{3p^2}{12p^7}$
$= \frac{1}{4p^5}$

95) $\frac{6nn^3}{4n^2}$

96) $\frac{3r \cdot 5r^4}{8r^3}$

97) $\frac{3nn^3}{4n^2}$

98) $\frac{4m^3}{(m^4)^3}$

99) $\frac{4k^3}{(2k^2)^4}$

100) $\frac{4a^3 \cdot 2a^2}{(3a^2)^3}$

101) $\frac{3m^4}{(m^2)^3 \cdot 3m^2}$

Algebra 2 Name_____ ID: 1

Summer Factoring Review

Date_____ Period____

Factor each completely.

102) $3n^3 + 21n^2$ $= 3n^2(n+7)$

103) $4n^2 - 28n$

104) $5x^3 + 70x^2 + 225x$

105) $n^2 + 7n$

106) $m^2 + 11m + 18$ combine ← multiply

$= (m+9)(m+2)$

107) $n^2 + 20n + 100$

108) $2x^4 + 12x^3 - 80x^2$

109) $4r^3 - 40r^2$

110) $p^3 - 6p^2 + 8p$

111) $6m^3 + 30m^2 - 84m$

112) $4p^3 - 16p^2 + 12p$

113) $b^2 + 2b - 24$

114) $v^2 + 18v + 81$

115) $p^2 - 2p - 80$

116) $6k^2 - 18k + 12$

117) $2v^2 + 20v + 48$

118) $n^3 - 6n^2 + 5n$

119) $5x^2 + 30x$

120) $2p^3 - 12p^2 - 80p$

121) $x^4 + 7x^3 - 8x^2$