

# Alg 2 Foundations (Review Problems for Ch. 1 TEST)

- Do the following problems on separate paper, showing your work as necessary.
- Check your answers on the answer sheet.
- Note: You have been learning about your graphing calculator the last few days. You can use them on the first test BUT there will be no questions requiring them on this first test.

## Linear Practice

- Write the equation of the line that has a slope of  $-\frac{3}{5}$  and a y-intercept of 11.
- Determine the equation of a line that passes through  $(-3, 2)$  and  $(0, -1)$
- Determine the equation of a line that passes through  $(15, 5)$  and  $(-10, -5)$
- Given the equation  $2x - 7y = 3$ , determine the slope and y-intercept.
- Graph the line (on graph paper),  $y = \frac{2}{3}x + 4$
- Graph the line (on graph paper)  $y = -2x - 1$

## Function Practice

- |                       |                         |                                       |
|-----------------------|-------------------------|---------------------------------------|
| ⑦ $f(x) = \sqrt{x-3}$ | ⑧ $g(x) = x^2 + 3x + 5$ | ⑨ $P(x) = 2x - 5$<br>$h(x) = 4x + 11$ |
| $f(28) =$             | $g(3) =$                | $P(3) + h(0) = ?$                     |
| $f(10) =$             | $g(-4) =$               |                                       |
| $f(-2) =$             |                         |                                       |

- ⑩  $f(n) = 3n + 20$   
find  $n$  if  $f(n) = 13$

- |                        |                                    |
|------------------------|------------------------------------|
| ⑪ $4x + 8 =$           | ⑭ $n^2 - 9$                        |
| ⑫ $2x^3 + 2x^2 =$      | ⑮ $25x^2 - 4$                      |
| ⑬ $3n^4 + 9n^2 - 15 =$ | ⑯ $x^2 - 16y^2$                    |
| ⑰ $p^2 - 5p - 14$      | } Factor into two binomial factors |
| ⑱ $x^2 - 9x + 20$      |                                    |
| ⑲ $3n^2 - 5n + 2$      |                                    |
| ⑳ $4x^2 + 11x - 3$     |                                    |

FACTORING Practice

Equation Solving - Practice

- 21  $6(6v+6) - 5 = 1+6v$
- 22  $-16+15n = -7(6+8n)+3$
- 23  $\frac{2}{3}(5x-1) = 8$
- 24  $\frac{2x+1}{5} = 6$
- 25  $4y - 2(6-y) = 6+y$

Formula re-arrangement

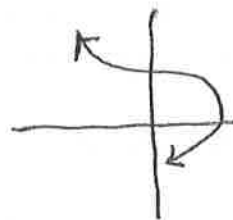
- 26 Solve for n  
 $PV = nrT$
- 27 Solve for T  
 $AB = \frac{rT}{x}$
- 28 Solve for r  
 $4(r-3z) = r-5z$
- 29 Solve for x  
 $y = \frac{1}{4}x + 1$

Multiply binomials, etc

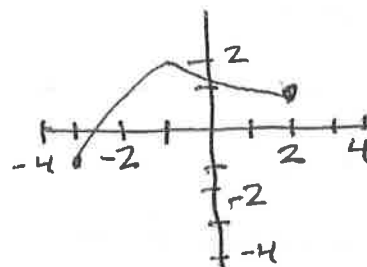
- 30  $(5x+2)(5x-2)$
- 31  $(2x-9)(x+4)$
- 32  $(2x-1)(10x^2+x-3)$

Function

33 Is the graph a function?



34 Find the domain



35 Find the range above.

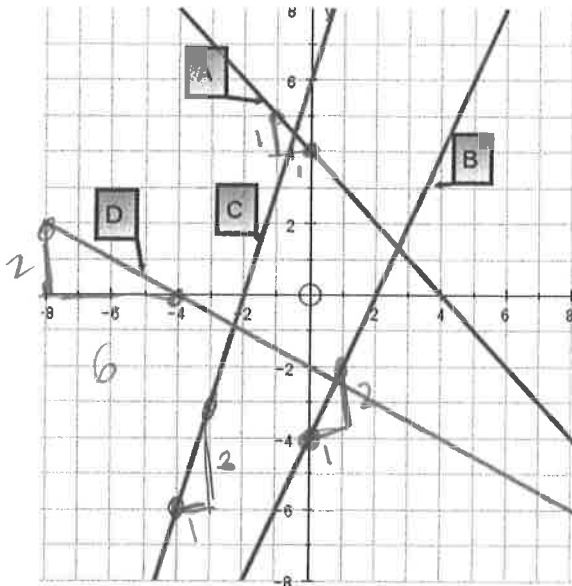
See attached sheet



# Linear Practice

## From Graphs

36 Find the equations of the 4 straight lines on the graph below in both the form  $y = mx + c$  and  $ax + by + d = 0$



	$y = mx + c$	
A		
B		
C		
D		

## Drawing Graphs

37 On the grid below, draw the graphs of  $3x + 2y - 12 = 0$  and  $5x - 2y + 6 = 0$

Hint: Solve for y first

