

ADVANCED ALGEBRA SEMESTER 1 REVIEW GUIDE KEY

1) $a = u + k$

2) $a = \frac{z}{m}$

3) $x = -\frac{k}{-w + v}$

4) $x = c + r + d$

5) $a = \frac{n + p}{m}$

6) $x = -yn + yp + m$

7) $a = \frac{np}{mb}$

8) $a = \frac{zp - n}{mp}$

9) $x = \frac{-mp - mn + y}{p + n}$

10) $a = \frac{mp}{nb}$

11) $\{0\}$

12) $\{7\}$

13) $\{ \text{All real numbers.} \}$

14) No solution.

15) $\{0\}$

16) $\{4\}$

17) No solution.

18) $\{-3\}$

19) $\{-1\}$

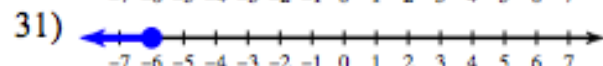
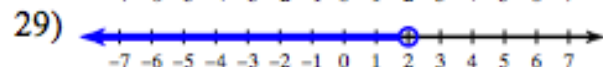
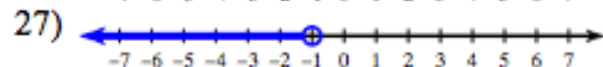
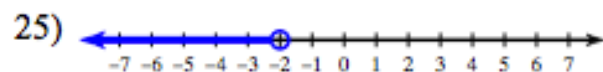
20) $\{ \text{All real numbers.} \}$

21) 9 senior citizen tickets; 15 student tickets

~~22) senior citizen ticket: \$9, child ticket: \$9~~

23) package of chocolate chip cookie dough: \$5, package of oatmeal cookie dough: \$18

24) rose bush: \$5, geranium: \$3

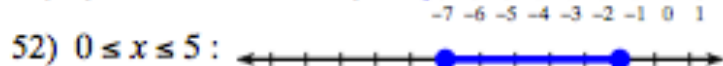
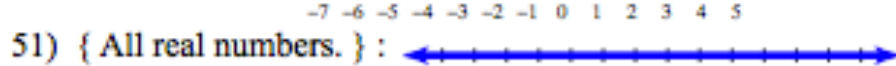
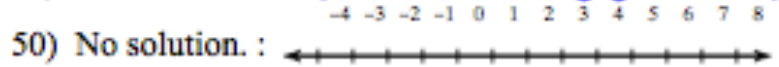
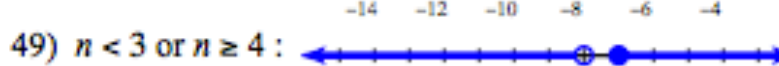
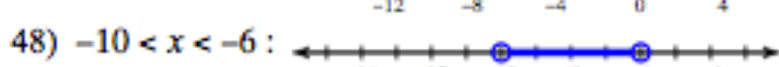
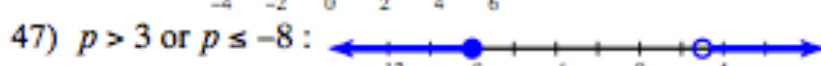
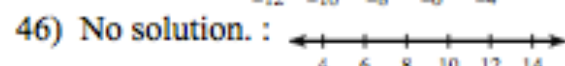
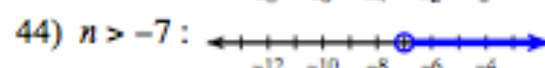
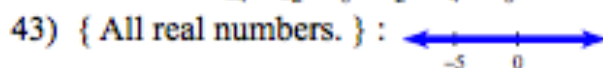
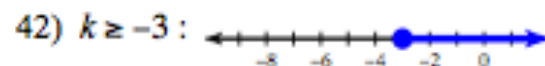
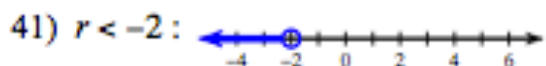


33) $n < 5$

34) $a \geq 6$

37) $m > 0$

38) $n \leq 6$



53) $\{8, -8\}$

54) $\{3, -3\}$

55) $\{8, -6\}$

56) $\{-4, 4\}$

57) $\{2, -4\}$

58) No Solution

59) $\{5, -19\}$

60) $\{11, 5\}$

61) $\left\{\frac{19}{7}, -\frac{1}{7}\right\}$

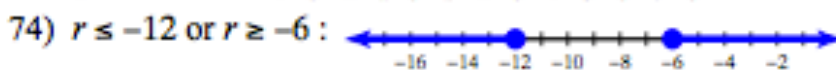
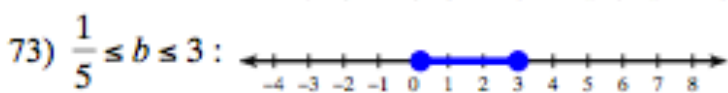
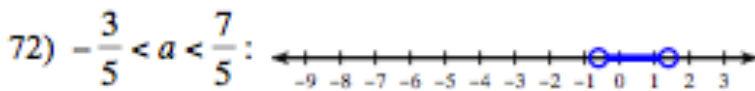
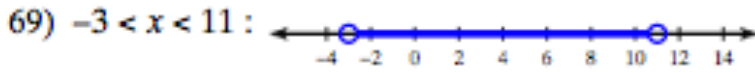
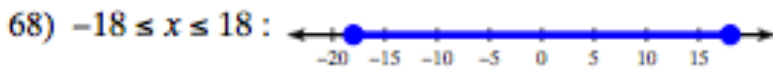
62) $\{-4, 14\}$

63) $\{0, -12\}$

64) $\left\{-\frac{3}{4}, 1\right\}$

65) No solution.

66) $\left\{\frac{9}{5}, -2\right\}$



75) -5

76) 26

77) 10

78) -23

79) -160

80) -2

81) -19

82) 7

83) -4

84) 101

85) 2

86) 0

87) -2

88) $\frac{7}{3}$

89) 0

90) $\frac{3}{5}$

91) -3

92) $\frac{2}{3}$

93) Undefined

94) -1

95) 0

96) $\frac{1}{2}$

97) $-\frac{9}{8}$

98) Undefined

99) $-\frac{8}{3}$

100) $\frac{10}{31}$

101) Undefined

102) 0

103) $-\frac{1}{6}$

104) 2

PG. 17: WHAT DID FARMER JOHN SHOW HIS CHICKEN WHEN SHE WOULDN'T LAY ANY EGGS? *A good egg sample!*

	105)	106)	107)	108)	109)	110)	111)	112)	113)	114)	115)	116)	117)	118)
IS A FUNCTION >	A	R	G	E	O	L	O	F	D	E	G	O	G	G
NOT A FUNCTION >	I	S	T	A	T	M	E	P	O	L	A	L	L	E

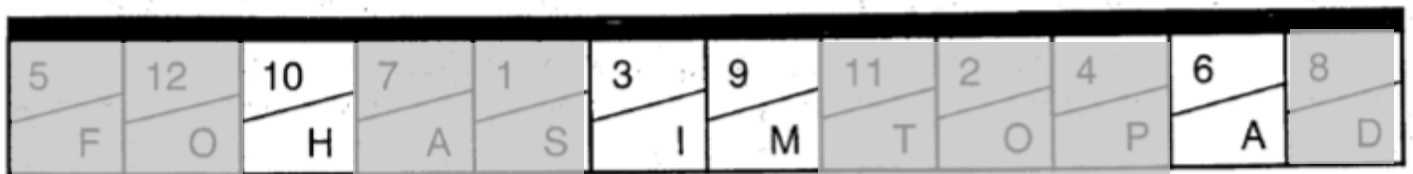
PG. 18: WHY DID THE GREENHOUSE CALL A DOCTOR? *It had window pains!*

119) D: $\{x x = 4, 8, 12, 16\}$ R: $\{y y = 41, 49, 58, 67\}$	120) D: $\{x x = -2, -1, 0, 1, 2\}$ R: $\{y y = 2, 4, 7\}$
121) D: $\{x x = -5, -3, 0, 8\}$ R: $\{y y = -9, -6, 4, 7, 12\}$	122) a. $f(3) = 5$ b. $f(-5) = -27$

123) a. $f(4) = -2$ b. $f(-9) = 37$	124) a. $g(6) = 65$ b. $g(-4) = -5$
125) a. $h(5) = -57$ b. $h(0) = 8$	126) R: $\{y \mid y = -3, 17, 43\}$
127) R: $\{y \mid y = -31, 13, 17\}$	128) R: $\{y \mid y = 11, 26, 47\}$
129) R: $\{y \mid y = -24, 0, 31.5\}$	130) R: $\{y \mid y = -16, -8, 2\}$

PG. 19: WHAT DID THE BABY PORCUPINE SAY WHEN IT BACKED INTO A CACTUS? *Hi, Ma!*

- 132) YES 133) YES 134) NO 135) YES 136) YES 137) NO
 138) YES 139) YES 140) NO 141) NO 142) YES 143) YES



PG. 20: DOMAIN AND RANGE

	DOMAIN		RANGE	
	Set Notation:	Interval Notation:	Set Notation:	Interval Notation:
144)	$\{x \mid x > -3\}$	$(-3, +\infty)$	$\{y \mid y \geq -4\}$	$[-4, +\infty)$
145)	$\{x \mid x \in \mathbb{R}\}$	$(-\infty, +\infty)$	$\{y \mid y \in \mathbb{R}\}$	$(-\infty, +\infty)$
146)	$\{x \mid x < 3\}$	$(-\infty, 3)$	$\{y \mid y > -1\}$	$(-1, +\infty)$
147)	$\{x \mid -3 < x < 4\}$	$(-3, 4)$	$\{y \mid -1 < y < 4\}$	$(-1, 4)$
148)	$\{x \mid -3 \leq x < 2\}$	$[-3, 2)$	$\{y \mid -5 < y \leq 2\}$	$(-5, 2]$
149)	$\{x \mid x \in \mathbb{R}\}$	$(-\infty, +\infty)$	$\{y \mid y \geq 0\}$	$[0, +\infty)$
150)	$\{x \mid -5 < x < 4\}$	$(-5, 4)$	$\{y \mid -2 < y < 2\}$	$(-2, 2)$
151)	$\{x \mid x < 2\}$	$(-\infty, 2)$	$\{y \mid y < 0\}$	$(-\infty, 0)$
152)	$\{x \mid -3 < x \leq 3\}$	$(-3, 3]$	$\{y \mid -2 < y < 3\}$	$(-2, 3)$

PG. 21/22: TRANSFORMATIONS

153) Down 7 units.	154) Left 1 unit.
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155) Up 12 units.	156) Right 3.2 units.
157) Left 4.1 units and down $\frac{3}{2}$ units.	158) Right 2 units and down $\frac{11}{3}$ units.
159) Left 1.78 units and up 5 units/	160) Right 6 units and up 9.34 units.
161) a. $g(x) = \frac{1}{x+3.7}$ b. $g(x) = f(x + 3.7)$	162) a. $g(x) = \frac{1}{x} + 8$ b. $g(x) = f(x) + 8$
163) a. $g(x) = \frac{1}{x-5} + 0.5$ b. $g(x) = f(x - 5) + 0.5$	164) a. $g(x) = \frac{1}{x-11}$ b. $g(x) = f(x - 11)$
165) a. $g(x) = \frac{1}{x+7} - 1.75$ b. $g(x) = f(x + 7) - 1.75$	166) a. $g(x) = \frac{1}{x} - 15$ b. $g(x) = f(x) - 15$
167) a. $g(x) = \frac{1}{x-13} - 7.77$ b. $g(x) = f(x - 13) - 7.77$	168) a. $g(x) = \frac{1}{x+10} + 8.5$ b. $g(x) = f(x + 10) + 8.5$
169) a. $g(x) = \frac{1}{x+\frac{4}{3}} - 17$ b. $g(x) = f\left(x + \frac{4}{3}\right) - 17$	170) a. $g(x) = \frac{1}{x-6.4} + \frac{13}{4}$ b. $g(x) = f(x - 6.4) + \frac{13}{4}$