MATH SPRINC	1314 EXAM #1ne G 2024 EGLEY	PRINT NAME NEATLY $\rightarrow$	pg 1ne	
0. THE WHEN	E FINAL EXAM FOR T MON/WED CLA TUE/THU CLA IS THE FINAL EXAM WRITE IT (TH	THIS CLASS IS <b>ASS:</b> 10:00 – 11:50 MONDA <b>ASS:</b> 12:30 – 2:20 THURSI 1 FOR THIS CLASS? HE WHOLE THING!) HERE $\rightarrow$	AY, MAY 6 DAY, MAY 9	(+1pt)
IMPOR DISCU FORFE	RTANT: YOU MAY US SSED IN CLASS OR II BIT YOUR CLAIM TO	E ONLY THE METHODS DISCUS F YOU DO NOT SHOW YOUR WO ANY CREDIT.	SED IN CLASS. IF YOU USE METHODS RK IN A NEAT AND ORDERLY FASHIC	NOT N, YOU
I. MU PLEAS	LTIPLE CHOICE. WRITI E USE <u>ONLY</u> CAPITAI	E IN THE BLANK SPACE THE LETTE LETTERS. NOTE THAT THE SYMB	R CORRESPONDING TO THE CORRECT RE DL " $\mathbb R$ " REPRESENTS "ALL REAL NUMB	SPONSE. ERS".
1	_ WHAT IS THE HORIZO A. LEFT 3 B. RIGHT	ONTAL SHIFT FOR THE FUNCTION	$f'(x) = \sqrt[3]{x-3} + 5$ ? ZONTAL SHIFT E. NONE OF THESE	
2	WHAT IS THE VERTIC	CAL SHIFT FOR THE FUNCTION $y =$ C. DOWN 2 D. IT HAS NO VER	f(x+4)+2? TICAL SHIFT E. NONE OF THESE	
3	WHAT IS THE DOMAI A. $[0,\infty)$ B. $[\frac{3}{2}, \frac{3}{2}]$	N OF THE FUNCTION $f(x) = 3x^3 + \infty$ $\infty$ ) C. $\mathbb{R}$ D. IT HAS NO DOM	+2x? AIN E. NONE OF THESE	
4	WHAT IS THE COORD A. (2,5) B. (-2,-	PINATES OF THE VERTEX OF THE FUTURE $-5$ ) C. $(-2,5)$ D. IT HAS NO	NCTION $f(x) =  x+2  + 5$ ? VERTEX E. NONE OF THESE	
5	WHAT IS THE RANGE A. $[0,\infty)$ B. $(0,\infty)$	C OF THE BASIC SHAPE SQUARE FUND) C. $\mathbb{R}$ D. $\{0,\infty\}$ E. NO	CTION? NE OF THESE	
6	WHAT IS THE DOMAI A. $[0,\infty)$ B. $(0,\infty)$	N OF THE FUNCTION $f(x) = con_1$ (c) C. $\mathbb{R}$ D. {1} E. NONE	(x) ? OF THESE	
7	WHAT IS THE DOMAI A. $\mathbb{R} - \{2\}$ B. [-	N OF THE FUNCTION $f(x) = \sqrt{x} - 2,\infty$ ) C. $[2,\infty)$ D. $\mathbb{R}$ E	2 ? NONE OF THESE	
8	WHAT IS THE HORIZO	ONTAL SHIFT FOR THE FUNCTION	$f(x) = x^2 + 7$ ? ZONTAL SHIFT E. NONE OF THESE	
9	FOR THE FUNCTION CORRESPOND? A. AMPLITUDE B. D. ASYMPTOTE E. 1	$f(x) = 6(x+4)^2 - 3$ , TO WHAT DO HORIZONTAL SHIFT C. VERTICA NONE OF THESE	es the "-3" ll shift	
10	WHICH PAIR OF FUN A. $f(x) = cube(x)$ C. $f(x) = recip(x)$ E. NONE OF THESE.	ACTIONS HAVE THE SAME RANGE A & $f(x) = sqrt(x)$ B. $f(x) = sqr(x)$ D. $f(x) = sqr(x)$	S THE FUNCTION $f(x) = abs(x)$ ? f(x) = sqr(x)  &  f(x) = sqrt(x) f(x) = sqrt(x)  &  f(x) = semi(x)	

11. \_\_\_\_\_ WHICH OF THESE FUNCTIONS HAS A **DOMAIN** WHICH IS THE SAME AS THE DOMAIN OF THE SQUARE ROOT FUNCTION?

A.  $f(x) = \sqrt[3]{x}$  B. f(x) = |x| C.  $f(x) = x^2$  D.  $f(x) = \sqrt{1 - x^2}$  E. NONE OF THESE.

12. WHAT IS THE DOMAIN OF THE FUNCTION  $f(x) = \frac{x-1}{x^2-9}$ ? A.  $\mathbb{R}$  B.  $\mathbb{R} - \{-3,3\}$  C.  $\mathbb{R} - \{3\}$  D.  $\mathbb{R} - \{-3,1,3\}$  E. NONE OF THESE

FROM THIS POINT FORWARD, IF YOU DO NOT SHOW YOUR WORK IN A NEAT AND ORDERLY FASHION, YOU FORFEIT YOUR CLAIM TO ANY CREDIT. SHOW ALL YOUR WORK <u>AS DEMONSTRATED IN CLASS.</u>

II. SKETCH THE GRAPH OF EACH BASIC SHAPE FUNCTION. YOU NEED NOT PLOT OR LABEL ANY POINTS.					
ALSO, FOR EACH FUNCTION, STATE THE DOMAIN AND RANGE.					
13. (A) $f(x) = \sqrt[3]{x}$	(B) THE RECIPROCAL FUNCTION	(C) $f(x) = abs(x)$			
מ	מ	$D_{f-}$			
$\nu_{f=}$	$\nu_{f=}$	<i>J</i> – <b>D</b>			
$R_{f=}$	$R_{f=}$	$\Lambda_{f=}$			

III. SKETCH THE GRAPH OF EACH FUNCTION, SHOWING ALL YOUR WORK <u>AS DEMONSTRATED IN CLASS</u> . <b>LABEL ALL POINTS YOU PLOT</b> ! IF YOU DO NOT SHOW YOUR WORK IN A NEAT AND ORDERLY FASHION, YOU FORFEIT YOUR CLAIM TO ANY CREDIT.				
14. $f(x) = x^2 - 1$	15. $f(x) = \sqrt[3]{x-2}$			

CONTINUE GRAPHING.		
16. $f(x) = \sqrt{x+4} - 1$	17. $f(x) =  x+2  + 3$	

IIII. DETERMINE THE DOMAIN OF EACH FUNCTION. SHOW YOUR WORK AS DEMONSTARTED IN CLASS.		
$18.  f(x) = \sqrt{x-7}$	19. $f(x) = \frac{x^3 + x}{5x - 15}$	
20. $f(x) = 3x^2 + 8$	21. $f(x) = \frac{5-x}{x^2 - 16}$	

