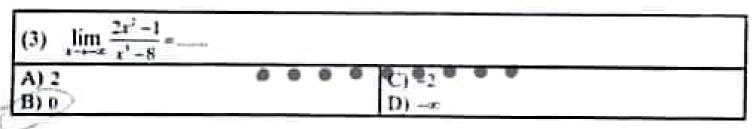
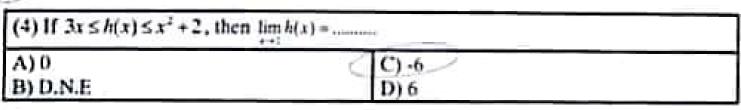
(1) If $\lim_{x \to 1} f(x) = 2$ and $\lim_{x \to 1} g(x) = 2$	$\sin x = -5$, then $\lim_{x \to 3} \frac{g(x) + 3}{3f(x) - 2} = \dots$
$\frac{A)-2}{B)-\frac{1}{2}}$	C) 2 D) 1/2

$(2) \frac{d}{dt} \left(\frac{2+3x}{2-3x} \right)_{t=1} = \dots$	
A) 12	C) 18
B) -12	D) -18





(5) If
$$f(x) = 5x^{\frac{1}{3}} + x^{-2} - 10$$
, then $f'(x) = \dots$
A) $5x^{\frac{1}{3}} - 2x^{-3}$
B) $x^{\frac{1}{3}} - 2x^{-3}$
C) $x^{\frac{1}{3}} + 2x^{-3}$
D) $5x^{\frac{1}{3}} + 2x^{-3}$

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- (6) The function f(1) = 4x-1 if is continuous at x=1. 5x-2 if 1 5 1
- A) Truc

B) False

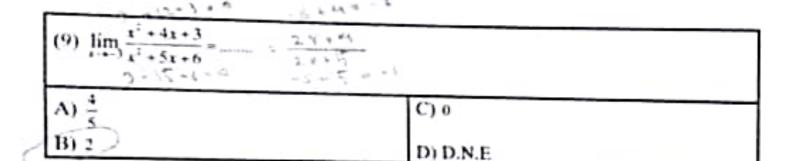
(7) $\lim_{x \to 0} \frac{\sqrt{4+x}-2}{x} = \dots$	
A) 1	C) 1/4
B) 0	D) ∞

- (8) The equation of the tangent to the curve $y = \frac{1}{x^2 2}$ at (L-1) is
- A) y+21+3=0

C) y + 2x - 1 = 0

B) 2y-x+3=0

D) 2y - x + 1 = 0



(10) The function of $f(x) = \sqrt{3x-1}$ is continuous on

(11) $\lim_{x \to a} (10x - x^2 - 4) = \dots$ (C) -20A) 20 D) DNE B) 40

(12) $\lim_{x\to 2} \frac{x^2-4}{ x-2 } = $		
A) 0 B) -1	C) · 4	
B) -1	(D) 4)	

(13) If
$$f(x) = \frac{1}{x^3 - 8}$$
, then $f'(x) = \frac{1}{(x^3 - 8)^3}$
B) $\frac{-3x^2}{(x^2 - 8)^3}$
C) $\frac{3x^2}{(x^2 - 8)^3}$
D) $\frac{-3x^2}{(x^3 - 8)^2}$

(14) The derivative of
$$f(x) = \sqrt{x^3}$$
 by using definition is

(14) The derivative of $f(x) = \sqrt{x^3}$ by using definition is

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(15) $\lim_{h \to \infty} \frac{\sqrt{(x-h)^3} + \sqrt{x^3}}{h}$

(16) $\lim_{h \to \infty} \frac{\sqrt{(x-h)^3} - \sqrt{x^3}}{h}$

(17) $\lim_{h \to \infty} \frac{\sqrt{(x-h)^3} - \sqrt{x^3}}{h}$

(15)
$$\frac{d}{dx} \left(\frac{x^3 + x + 1}{x^4} \right) = \dots$$

A) $\frac{1}{x^2} + \frac{3}{x^4} + \frac{4}{x^5}$
B) $-\frac{1}{x^2} + \frac{3}{x^4} - \frac{4}{x^5}$
C) $\frac{1}{x^2} - \frac{3}{x^4} + \frac{4}{x^5}$
D) $-\frac{1}{x^2} - \frac{3}{x^4} - \frac{4}{x^5}$

(16)
$$\lim_{x \to 2} \frac{x-2}{x^2-9} = \dots$$
(A) DNE
(B) $+\infty$
(C) $-\infty$
(D) 0

(17)
$$\lim_{t \to -\infty} \frac{1-t}{\sqrt{4t^2 + 1}} = \dots$$

A) $\frac{1}{4}$

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

C) $-\frac{1}{2}$

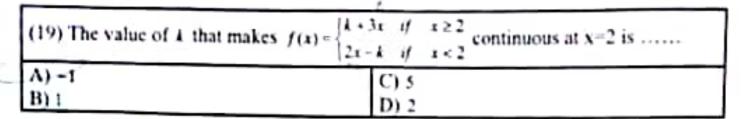
D) $-\frac{1}{4}$

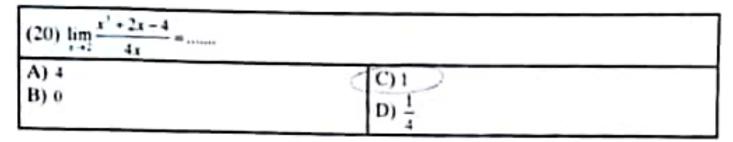
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(18) The function of $K(x) = \frac{x-6}{x^2-4}$ is continuous on			
A) (-∞,-2) B) (2,∞)	C) R-(-2.2)		





(21) The equation of the normal to the curve
$$y = \frac{x-1}{x+1}$$
 at (-2.3) is
A) $2y-x+4=0$ C) $2y+x-4=0$
B) $y+2x+7=0$ D) $y-2x-7=0$

(23)
$$\lim_{x \to x} \frac{3x^2 + 2x - 3}{2x - x^2} = \dots$$

A) 0
B) -3

C) 3

D) ∞

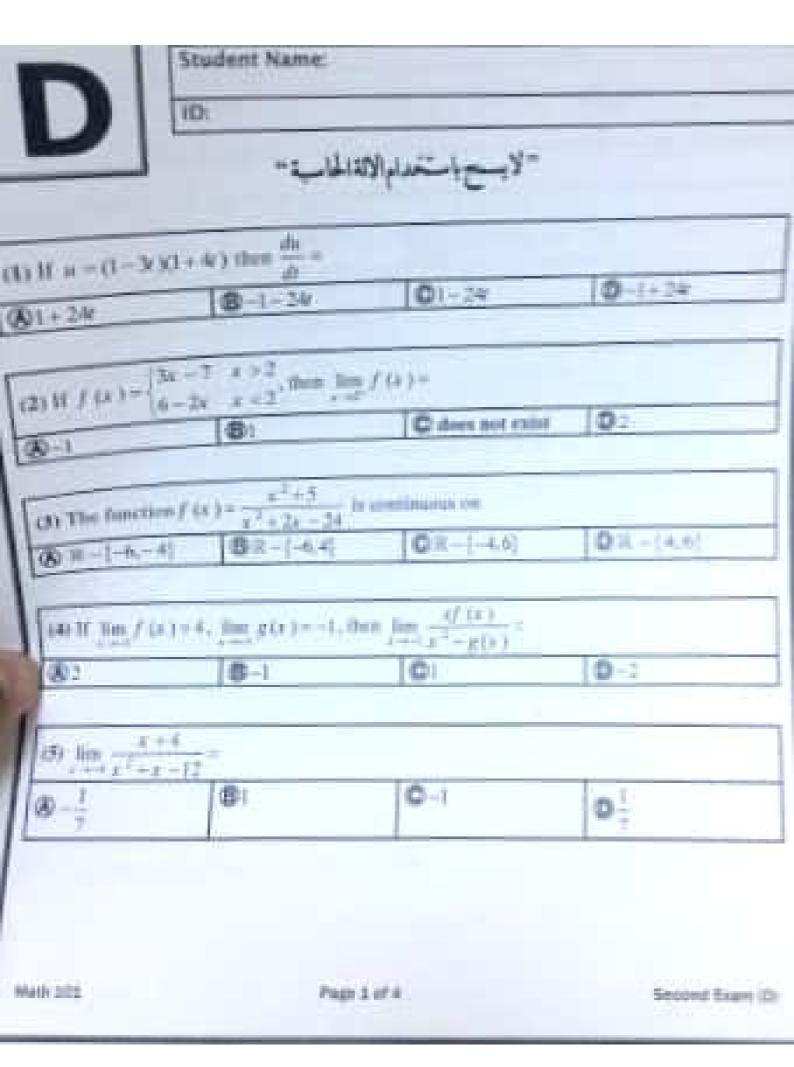
(24)
$$\lim_{x \to -\infty} \frac{x^4 - 3x^2 + x}{x^3 - x + 2} = \dots$$

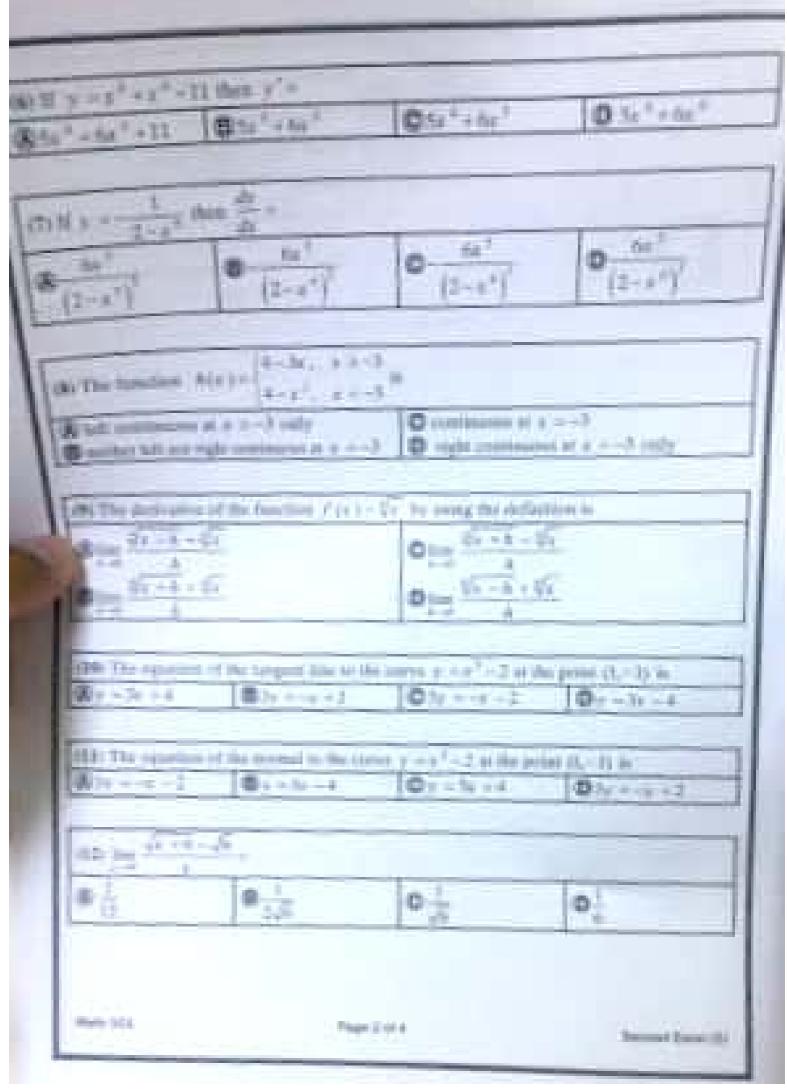
(A) $-\infty$

(B) 0

(C) ∞
(D) 1

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(24)	[-4.3]=		
(a)	4.3	(b)	-5
(c)	4.3	(d)	-4
(25)	Range of the function $f(x) = \lfloor x \rfloor$ is		
(a)	the real numbers.	(b)	the natural numbers.
(c)	the rational numbers.	(d)	the integer numbers.
(26)	$\frac{5\pi}{3}$ m	(0)	are integer namework
(a)	120°	(b)	240°
(C)	300°	(4)	4209
(27)	If the radius of a circle is 1cm, what angle	(d)	420°
(a)	2 rad.	is subte	ended by an arc of 2cm?
	- rau.	(b)	3 rad.
(c)	4 rad.	(d)	5 rad.
(28)	$sec(30^\circ) \times tan(135^\circ) =$		
(a)	$\frac{-\sqrt{3}}{2}$	(b)	$\frac{\sqrt{3}}{2}$
(c)	$\frac{-2}{\sqrt{3}}$	(d)	$\frac{2}{\sqrt{3}}$
(29)	$2 \times \sin(25^\circ) \times \cos(25^\circ) =$		43
(a)	sin(100°)	(b)	sin(50°)
(c)	cos(100°)	(d)	cos(50°)
(30)	Range of the trigonometric function sir		
(a)	[-1, 1]	(b)	[0,∞)

(c)

(0, 1)

(d)

 $(-\infty,\infty)$