

$$d = 5, a_1 = 3$$

$$2n$$

$$a_{n+2} - a_n = a_n + 2d - a_n$$

$$a_{n+2} - a_n = 2d$$

$$(n -)$$

$$2d = 2 \cdot 5 = 10$$

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$a_2 = a_1 + d = 3 + 5 = 8$	$a_1 = 3$	a_1
$2d = 10$	$2d = 10$	d
$\frac{2n}{2} = n$	$\frac{2n}{2} = n$	n

$$S_n = \frac{n[2a_1 + d(n-1)]}{2}$$

$$S_n = \frac{n[2 \cdot 3 + 10(n-1)]}{2}$$

$$S_n = \frac{n[6 + 10(n-1)]}{2}$$

$$S_n = n[3 + 5(n-1)]$$

$$S_n = n(3 + 5n - 5)$$

$$S_n = n(5n - 2)$$

$$\boxed{S_n = 5n^2 - 2n}$$

$$.5n^2 - 2n$$

$$S_n = \frac{n[2a_1 + d(n-1)]}{2}$$

$$S_n = \frac{n[2 \cdot 8 + 10(n-1)]}{2}$$

$$S_n = \frac{n[16 + 10(n-1)]}{2}$$

$$S_n = n[8 + 5(n-1)]$$

$$S_n = n(8 + 5n - 5)$$

$$S_n = n(5n + 3)$$

$$\boxed{S_n = 5n^2 + 3n}$$

$$5n^2 + 3n$$

$$a_{2n-1} = 193$$

$$a_n = a_1 + (n-1)d$$

$$a_1 + (2n-1-1)d = 193$$

$$3 + (2n-2) \cdot 5 = 193$$

$$5(2n-2) = 190$$

$$2n-2 = 38$$

$$2n = 40$$

$$n = 20$$

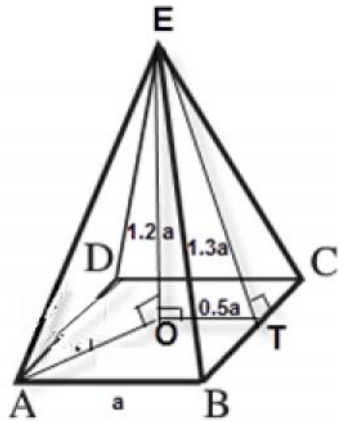
$$(\quad 40 \quad)$$

$$n = 20$$

$$5 \cdot 20^2 + 3 \cdot 20 = 2060$$

$$2060$$

. a , ABCDE .
 . EBC BC - $ET = 1.3a$
 . $OT = 0.5a$ ΔABC - OT
 . $\sphericalangle EOT = \sphericalangle EOA = 90^\circ$ OE



: ΔEOT - ,
 $(EO)^2 + (OT)^2 = (ET)^2$
 $(EO)^2 + (0.5a)^2 = (1.3a)^2$
 $(EO)^2 + 0.25a^2 = 1.69a^2$
 $(EO)^2 = 1.44a^2$
 $\boxed{EO = 1.2a}$ $\leftarrow 0 < EO < 1.3a$

. $1.2a$:

. " 400 .

$$V = \frac{(AB)^2 \cdot EO}{3}$$

$$400 = \frac{a^2 \cdot 1.2a}{3}$$

$$400 = 0.4a^3$$

$$1000 = a^3$$

$$a = \sqrt[3]{1000}$$

$$\boxed{a = 10\text{cm}}$$

. $a =$ " 10 :

. $AC =$ " $10\sqrt{2}$, ΔABC - ,

. $AO =$ " $5\sqrt{2}$,

. $EO =$ " 12 , $a =$ " 10

. $\sphericalangle AEO$,

ΔEAO

$$\tan \sphericalangle AEO = \frac{AO}{EO}$$

$$\tan \sphericalangle AEO = \frac{5\sqrt{2}}{12}$$

$$\boxed{\sphericalangle AEO = 30.51^\circ}$$

. 30.51°

SABCD

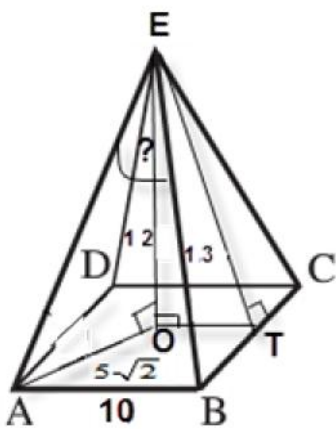
EA

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$$\frac{f}{2} \leq x \leq \frac{3f}{2} \quad f(x) = 2 \cos 2x + 10 \cos x$$

$$f\left(\frac{f}{2}\right) = 2 \cos\left(2 \cdot \frac{f}{2}\right) + 10 \cos \frac{f}{2} = -2 \rightarrow \left(\frac{f}{2}, -2\right)$$

$$f\left(\frac{3f}{2}\right) = 2 \cos\left(2 \cdot \frac{3f}{2}\right) + 10 \cos \frac{3f}{2} = -2 \rightarrow \left(\frac{3f}{2}, -2\right)$$

$$\left(\frac{3f}{2}, -2\right), \left(\frac{f}{2}, -2\right) :$$

$$f'(x) = -4 \sin 2x - 10 \sin x$$

$$-4 \sin 2x - 10 \sin x$$

$$-8 \sin x \cos x - 10 \sin x = 0$$

$$\sin x(-8 \cos x - 10) = 0$$

$$\sin x = 0 \quad 8 \cos x - 10 = 0 \rightarrow \cos x = -1.25 \rightarrow \emptyset \quad -1 \leq \cos x \leq 1$$

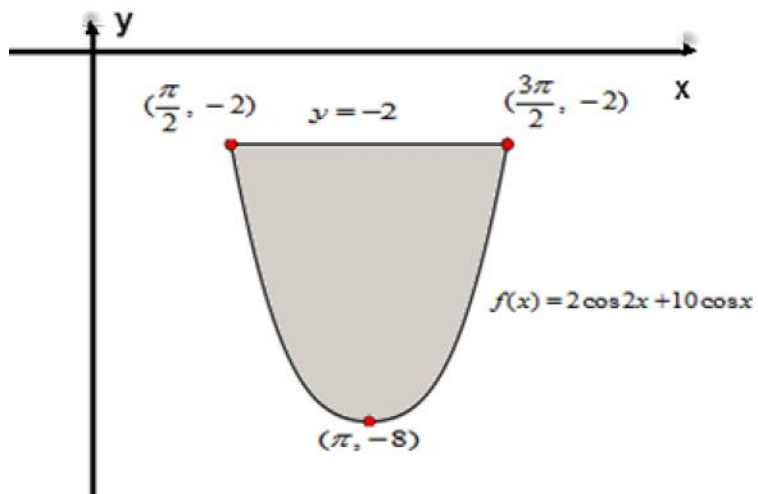
$$x = f k$$

$$k = 1 \rightarrow x = f \rightarrow f(f) = 2 \cos(2 \cdot f) + 10 \cos f = -8 \rightarrow (f, -8)$$

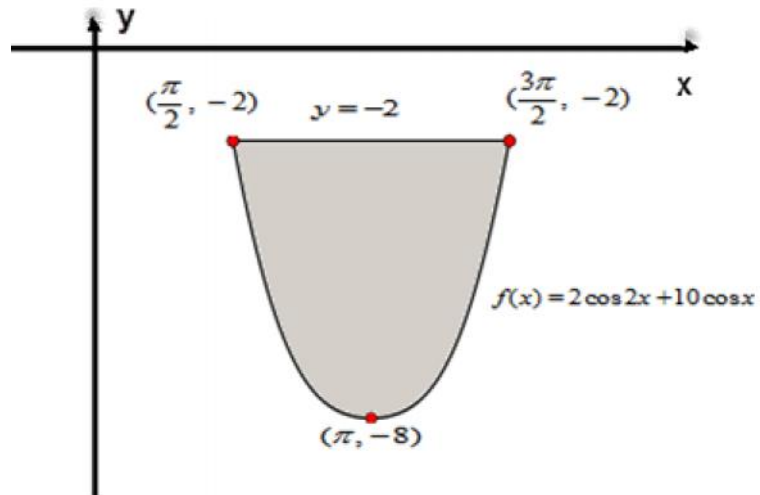
x	$\frac{f}{2}$		f		$\frac{3f}{2}$
$f(x)$	-2		-8		-2
	Min	↖	Max	↘	Min

$$\left(\frac{3f}{2}, -2\right), \left(\frac{f}{2}, -2\right), (f, -8) :$$

$$y = -2$$



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$$-2 - (2 \cos 2x + 10 \cos x) = -2 - 2 \cos 2x - 10 \cos x$$

$$S = \int_{\frac{3f}{2}}^{\frac{f}{2}} (-2 - 2 \cos 2x - 10 \cos x) dx$$

$$S = \left(-2x - \frac{2 \sin 2x}{2} - 10 \sin x \right) \Big|_{\frac{3f}{2}}^{\frac{f}{2}}$$

$$S = \left(-2 \cdot \frac{3f}{2} - \sin 2 \cdot \frac{3f}{2} - 10 \sin \cdot \frac{3f}{2} \right) - \left(-2 \cdot \frac{f}{2} - \sin 2 \cdot \frac{f}{2} - 10 \sin \cdot \frac{f}{2} \right)$$

$$S = (0.5752) - (-13.14)$$

$$\boxed{S = 13.717}$$

.13.717

:

$$f(x) = e^x - x \quad (1)$$

x :

(2)

$$\boxed{f'(x) = e^x - 1}$$

$$e^x - 1 = 0$$

$$e^x = 1$$

$$x = 0 \rightarrow y = e^0 - 0 = 1$$

$$f''(x) = e^x > 0 \rightarrow (0,1) \text{ Min}$$

(0,1) :

x , (0,1) (3)

x 1

$$g(x) = \frac{1}{e^x - x} = \frac{1}{f(x)} \quad (1)$$

x , $g(x)$, x $f(x)$ -

x :

$$g(x) = \frac{1}{e^x - x} = \frac{1}{f(x)} \quad (2)$$

$$\boxed{g'(x) = \frac{-f'(x)}{f^2(x)}}$$

$x = 0$, $f'(x)$ $g'(x)$,

$x < 0$, $x > 0$:

$$a, f(x) = \ln(x^2) - x^2 + a$$

$$x \neq 0 \quad x^2 > 0 \quad \ln$$

$$x \neq 0 :$$

$$f'(x) = \frac{2x}{x^2} - 2x$$

$$\boxed{f'(x) = \frac{2x - 2x^3}{x^2}}$$

$$0 = 2x - 2x^3 \quad /: 2x \neq 0$$

$$0 = 1 - x^2$$

$$x^2 = 1$$

$$x = 1 \rightarrow f(1) = \ln(1^2) - 1^2 + a \rightarrow \boxed{(1, a-1)}$$

$$x = -1 \rightarrow f(-1) = \ln((-1)^2) - (-1)^2 + a \rightarrow \boxed{(-1, a-1)}$$

$$\text{mone: } f''(x) = 2 - 6x^2$$

$$\text{mone: } f''(1) = 2 - 6 \cdot 1^2 < 0 \rightarrow \text{Max}$$

$$\text{mone: } f''(-1) = 2 - 6 \cdot (-1)^2 < 0 \rightarrow \text{Max}$$

$$(-1, a-1), (1, a-1) :$$

$$a-1 \quad (\quad) \quad y$$

$$x \quad 0 \quad y \quad a=1$$

$$a=1 :$$