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<b>%</b> 5	7.	After a fair d Which of the (A) x is grea (D) x is less	ie with faces nu following is mo uter than 2 than 3	$\begin{array}{l} \text{umbered 1 to 6 is n} \\ \text{ost likely?} \\ \textbf{(B) } x \text{ equals} \\ \textbf{(E) } x \text{ equals} \end{array}$	rolled, the numb 4 or 5 3	er on the top fac $(\mathbf{C}) x$ is eve	n militte the second se	mistitute
×22.	8.	If $2.4 \times 10^8$ is	s doubled, then $(\mathbf{B})$ $4.8 \times 2$	the result is equal $0^8$ (C) $4.8 \times 10^9$	ll to ${}^{8} (\mathbf{D}) 24 \times 10$	<sup>16</sup> ( <b>F</b> ) $4.8 \times 10^{-10}$	J16	
PIC 1	mstitut9.#	A proposed r and each has are in a stack	new \$5 coin is area 5 cm <sup>2</sup> . T that has a vol	called the "foonie" The thickness of the ume of 50 $\text{cm}^3$ ?	". The foonie's ne foonie is 0.5 c	two faces are id m. How many	entical foonies	Tastitute
1	10.	(A) 5 The Athenas and cannot e the playoffs, number of th	(B) 10 are playing a nd in a tie. So they must win eir remaining g	<ul> <li>(C) 15</li> <li>44 game season.</li> <li>far, they have 20 at least 60% of al games that they m</li> </ul>	( <b>D</b> ) 20 Each game resu wins and 15 los l of their games. ust win to make	(E) 40 Its in a win or sses. In order to What is the su the playoffs?	a loss, o make nallest	Intstitute
PR-		(A) 8	(B) 9	(C) 5	(D) 6	(E) 7	× % %	>
.32	Par 11.	rt B: Each co The operatio For example The value of	prrect answer n " $\nabla$ " is define $(1,2)\nabla(3,4) =$ $(3,1)\nabla(4,2)$ is	is worth 6. d by $(a,b)\nabla(c,d)$ (1)(3) + (2)(4) =	= ac + bd. 11.	Withthe Har Ma	Institute # *	Institute
975 976	Thitting #	(A) 10 The circle gra taken by the the favourite students sur sundwiches?	( <b>B</b> ) 11 aph shown illus Cayley H.S. St e cafeteria foot veyed said that	(C) 13 trates the results tudent Council to d. How many o at their favourite	( <b>D</b> ) 14 of a survey determine of the 200 food was	(E) 24 Pizza 30%		Institute
	institute 3	(A) 10 (D) 50	<ul><li>(B) 20</li><li>(E) 70</li></ul>	(C) 35	inte the start	Cookies Fries 35%	Millitte # 3	Institute
<b>%</b> 5	13.	In the subtra What is the <b>(A)</b> 20 ( <b>D)</b> 13	action shown, $L$ value of $K + L$ (B) 19 (E) 9	K, L, M,  and  N + M + N? (C) 16	are digits. K	$ \begin{array}{cccccccccccccccccccccccccccccccccccc$	matime the the first of the fir	Institute
1	14.	On the number of three equal period $(\mathbf{A}) \frac{1}{7}$ ( $\mathbf{D}$ ) $\frac{1}{10}$	ber line, points parts. What is t (B) $\frac{1}{8}$ (E) $\frac{1}{11}$	S $M$ and $N$ divid the value at $M$ ? (C) $\frac{1}{9}$	le LP into			Institute
	in the	*资 <sup>%</sup>	、weiter the state of the state	物族情	斯林海常	海城市	物族资料	26



22. The top section of an 8 cm by 6 cm rectangular sheet of paper is folded along a straight line so that when the top section lies flat on the bottom section, corner P lies on top of corner R. The length of the crease, in cm, is

multille m # \*

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- (A) 6.25 **(B)** 7 (C) 7.5
- **(D)** 7.4 **(E)** 10

Institute m X 3

mutilite m # \*

Ro

N.

N.

Ro

Y.

Y.

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musitute ## 23. A Fano table is a table with three columns where

- each entry is an integer taken from the list  $1, 2, 3, \ldots, n, and$
- each row contains three different integers, and
- for each possible pair of distinct integers from the list  $1, 2, 3, \ldots, n$ , there is exactly one row that contains both of these integers.

The number of rows in the table will depend on the value of n. For example, the table shown is a Fano table  $\sim$ with n = 7. (Notice that 2 and 6 appear in the same row only once, as does every other possible pair of the numbers 1, 2, 3, 4, 5, 6, 7.) For how many values of n with  $3 \le n \le 12$  can a Fano table be created?

(B)  $\frac{3}{8}$ 

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Dolly, Molly and Polly each can walk at 6 km/h. Their one motorcycle, which travels 24.at 90 km/h, can accommodate at most two of them at once (and cannot drive by itself!). Let t hours be the time taken for all three of them to reach a point 135 kmaway. Ignoring the time required to start, stop or change directions, what is true < 4.3 称林 塔 彤 about the smallest possible value of t?

(A) $t < 3.9$	(B) $3.9 \le t < 4.1$	(C) $4.1 \le t <$
(D) $4.3 \le t < 4.5$	(E) $t \ge 4.5$ (i)	linstitute .

W. B We

25. Two numbers a and b with  $0 \le a \le 1$  and  $0 \le b \le 1$  are chosen at random. The number c is defined by c = 2a + 2b. The numbers a, b and c are each rounded to II STA W. 'S PR the nearest integer to give A, B and C, respectively. (For example, if a = 0.432 and b = 0.5, then c = 1.864, and so A = 0, B = 1, and C = 2.) What is the probability that 2A + 2B - C? that 2A + 2B = C?

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

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(A)  $\frac{15}{32}$ 

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10 the H- 13 92

1  $\mathbf{2}$ 4 23 53 4 6 45 $\overline{7}$ 5 1 6 67 $\mathbf{2}$ 71 3 stitute \$ # 3 PS

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(E)  $\frac{3}{4}$ 

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(D)  $\frac{7}{16}$ 

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Y.

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