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15.	Find the value of <i>P</i> a. $\frac{511}{512}$	$P\left(\frac{1}{4}\right)$ for the polynomial b. $\frac{1023}{1024}$	mial $P(x) = 4x + 8$ c. $\frac{1023}{512}$	$4x^{2} + 16x^{3} + 32x$ d. $\frac{511}{256}$	4 + + 2048 x^{10} e. 2	Mastitut
16. K	In the expansion of a. -15 If $(4x - 16)^2 - 8$	f $(x-3)^5$ the coeff b. -5 $x^3 = 0$, then the solution	icient of x^4 would b c. -1 ution consists of wh	e which one of the d. 5 ich of the followin	following: e. 15 g:	Mastitute
R.	a. I only withit	I. $x = 2$ II. $x = 4i$ III. $x = -4i$ b. II only	c. I and II only	d. II and III only	e. I, II and III	Mastitute
R 18.	If $c > 0$, for what v a. 2	alue of c will the line b. 3	thes $3x + cy = 4$ and c. $\sqrt{5}$	1 cx + 2y = 5 NC d. $\sqrt{6}$	oT intersect? e. 6	Tastitute
R 19.	In how many distir white, and 2 are bl a. 72	nguishable ways can ue? b. 126	9 marbles be lined u c. 144	up in a row if 3 of t d. 630	hem are red, 4 are e. 1260	Tastitute
8 20.	Suppose that a circ counterclockwise, reach the point $(\sqrt{3}$ a. $\frac{\pi}{6}$	le of radius 2 inches starting at the point $\overline{3}$, 1)? b. $\frac{\pi}{3}$	is centered at the or (0,2). How many in c. $\frac{5\pi}{6}$	igin. An ant walks ches does the ant n d. $\frac{5\pi}{3}$	s along this circle leed to walk in order e. $\frac{10\pi}{3}$	to
21.	Suppose that a sph cube). How many meter?	ere is inscribed in a cubic meters is the	cube (meaning that t volume of the sphere	he sphere touches if the volume of t	all six faces of the he cube is 1 cubic	matitute
PK Institut		b. $\frac{\pi}{3}$	c. <u>5π</u> - 接 ⁶ - 新秋 - 5 - 5 - 5 - 5 - 5 - 5 - 5 - 5	d. 5元 3 mailutt 称林塔	e. $\frac{10\pi}{3}$	mstitute
% .	W. B. W.	att 's the	3 ~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~	1 % · · · · · · · · · · · · · · · · · ·	% · · · · · · · · · · · · · · · · · · ·	20



mutilite # # " Institute m H 3 Institute \$ 75 'S Institute \$7 75 Institute \$5 \$5 'S multinu m # 3 29. Marvin earned an 81 on his essay, a 91 on his midterm, and an 88 on his homework. The only Y. grade missing is his Final Exam. If the essay and midterm are each worth 25% of his grade, and homework is worth 10%, what grade must he make on his final exam to get an average of 90? a. 94.5 b. 95.5 c. 97.2 d. 98 e. 100 e. 5 situte # # 3 PC Divide the expression 5^{2015} by 7 and determine its remainder. d. 4 mainte the the the 30. b. 2 mailule ## c. 3 a. 1 Let x be defined on all reals. What is the largest value that y can attain if $y = (3x^2 + 4) - (3x - 4)^2$? No. 31. e. 20 into *** c. 10²/₃ b. $9\frac{1}{3}$ a. 2 d. 12 Two chords, AB and CD, in a circle intersect at point P as shown. If the 32. **-1**0 length of chord \overline{CD} is 42 and the lengths of segments \overline{AP} and \overline{CP} are 10 and 12 respectively, what is the length of AB? d. 40 a. 25 b. 35 c. 36 e. 46 面前抽曲新林塔梯 · 13 9% Y. 33.110 Define the two operations, \Diamond and \blacksquare , on the natural numbers as follows: $\diamond = \text{Minimum}(k, m)$ thus if k < m then $k \diamond m = k$ = Maximum(k, m) thus if k < m then $k \bullet m = m$ mutule # # 'S R Intitute the the 'S PE Which of the following statements are true for all x, y and z. Water Water I. $(x \diamond y) + z = (x + z) \diamond (y + z)$ II. $(x \diamond y) \bullet z = (x \bullet z) \diamond (y \bullet z)$ III. $(x + y) \blacksquare z = (x \blacksquare z) + (y \blacksquare z)$ Withit the the the the N. e. I, II, III a. I only b. II only c. I & II d. I & III 物体 Given the operations, \Diamond and \blacksquare , as defined in the previous problem find the solution set for k. 34. withthe # # * * * c. $\{3, 4, 5\}$ d. $\{5, 6, 7\}$ e. $\{7, 8, 9\}$ Ro $(k \diamond 7) \blacksquare 3 = (k \blacksquare 5) \diamond 9.$ b. {1, 2, 3} 5 to the the the to the the Be the to the the By the to the the B to the We B the to the W. B. Ro

