9

REGENTS HIGH SCHOOL EXAMINATION

NINTH YEAR MATHEMATICS

Monday, January 26, 1970-1:15 to 4:15 p.m., only

The last page of the booklet is the answer sheet, which is perforated. Fold the last page along the perforation and then, slowly and carefully, tear off the answer sheet. Now fill in the heading of your answer sheet. When you have finished the heading, you may begin the examination immediately.

Part T

Answer all questions in this part. Each correct answer will receive 2 credits. No partial credit will be allowed. Write your answers in the spaces provided on the separate answer sheet.

- 1 What is the numerical value of 3x + 4y if x = 2 and $y = \frac{1}{2}$?
- 2 If the replacement set is $\{2,3,4,5\}$, list the element(s) of the solution set of x-2>2.
- 3 A man 6 feet tall casts a shadow that is 5 feet long. How many feet long is the shadow cast by a nearby tree which is 42 feet tall?
- 4 Find the positive root of the equation $3x^2 243 = 0$.
- 5 What is the numerical value of (cos 60° + sin 30°)?
- 6 Express in terms of h and g the number of inches in h yards and g feet.
- 7 If x is a whole number, find the value of x which will make the following expression true:

$$\frac{1}{3} < \frac{x}{6} < \frac{2}{3}$$

- 8 There are 250 pupils in the 9th grade in a certain school and 80% of these are taking elementary algebra. What is the number of pupils taking elementary algebra?
- 9 Find $\sqrt{28}$ to the nearest tenth.

- 11 Given $\frac{y}{2a} = b$, solve for y in terms of a and b.
- 12 Express as a single fraction in simplest form: $\frac{n+7}{3} + \frac{n-3}{4}$
- 13 Solve the following system of equations for x: 3x + y = 7 2x y = 8
- 14 Factor completely: 3ax + 3ay + 6a
- 15 Express as a trinomial the product of x + 1 and x 3.
- 16 Find the quotient of $x^3 + 3x^2 + 2x$ divided by x + 1.
- 17 From $4x^2 8x$ subtract $7x^2 + 3x$.
- 18 Solve for n: $\frac{1}{2}(140 - n) = 30$
- 19 Find the solution set of: .1y + .01y = 2.2

[OVER]

Processor (20.30); Wrote in the speck processed on the separate accrets plant the security proceeding the course tion that here completely you'll engagement are adopted you'll Spiritten.

- 30 Which member has the product value?
 - (1) -1
- 131 -4 161 -6

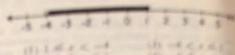
- 121 -4
- . It The expression (-1)(-2) is equivalent to (1) 1 (1) -1

 - (2) 2
- (4) 8
- 22 The equation $6(x \pm y) = 6x + 6y$ is an example
 - (1) associative less of australization

 - (2) associative how of address (2) concentrative how of address
 - (4) distributor law
- 23. The product of \$5° and \$5° is
 - (D) 88*
- 131 15"
- (2) 60

- (4) By
- In 15 bish number pair does not belong to the solution set of a -- 2y or 957
 - (3) (-4-7)
- (3) (3.0)
- (4) (4-3) (2) (3,-2)
- 25 Which is an equation of the straight line parallel to the avenue and I unit above it?
 - (1) x = 1
- (2) # SE S
- (Z) y = -1
- 141 4 m -1

- go the set (1.27) is a proper rotate of
 - William
- at 10 lack expression is droved by the great has



- (2) -3 m + m 1 (4) -4 m + c 2
- Dr. The value of land; or 70 hr
- 131 -3 121 E

- 131 -18

- 30 The sum of 2/12 and 1/27 in
 - (1) 3/39

(N) 745

(2) 7/3

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Part II

Assesser from questions from this part. Show all work orders otherwise directed.

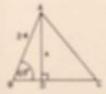
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a Cough the attetion set of the following system of imposition: [56]

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- 20 January Just is said 9:
 - a The length of a rectungle is I feet less than twice in width. If the perturber is 64 best, find its width, [Cults on algebraic collection will be accepted.] [1]
 - 8 In the accomparating diagram, line AS in 24 inches long and angle S equals 10 degrees.



Find, to the asserted inch, the length of abittole all: [4]

- Write an experience or a restore of equations which can be used to eather such of the following problem. In main more store what the noticine or excludes represent. Estation of the equations in not experied.
 - (8) S case inverte some contrary at PS, and twice as charle money at PS. If the populy recover from the five immediates in \$250, how much is invested at cash page? [7]
 - \$ The units right of a two-right treater is \$ 10000 than the tree right. It the rights of the treatment are meeting, a new impositor in historic which is 10 specified to treat or or original number. First the original meetins. (2)

- 35 A boy made not on a country road on his bicycle at 8 miles per hour. When the drive chain broke, he had to turn around and push the bicycle lack along the same road at a speed of 2 miles per bose. If the entire trip took 5 bicses, how far our into the country had be rabben? [Cody as algebraic adiation will be neverbook.] [1,5]
- 36 Asswer York a and 5
 - s Solve for s: [6] $s \frac{24}{s} = 10$
 - Find to the nonrest solute exoster the value of 2πR — 2πr, if R = 12.6, r = 7.6, and the approximation used for σ is 3.14. [4]
- 37 Write the letters a, b, c, d, and a on your assurer paper, and after such letter write the assurer to the corresponding question below: [37]
 - a What is the multiplicative inverse of $(-\frac{\pi}{4})$?
 - It What is the solution set of |x| + 2y = 37
 - 2 What is the number of significant digits in the numeral 3.0527
 - d . What is the additive inverse of (-2)?
 - s. What is the set of positive roots of Je or --67



FOR TEACHERS ONLY

SCORING KEY

NINTH YEAR MATHEMATICS

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Use only red ink or pencil in rating Regents papers. Do not attempt to correct the pupil's work by making insertions or changes of any kind. Use checkmarks to indicate pupil errors.

Unless otherwise specified, mathematically correct variations in the answers will be allowed.

Units need not be given when the wording of the questions allows such omissions.

Part I

Allow 2 credits for each correct answer; allow no partial credit. For questions 20-30, allow credit if the pupil has written the correct answer instead of the number 1, 2, 3, or 4.

(1) 8	(11) 2ab	(21) 1
(2) 5 or {5}	$(12) \frac{7n+19}{12}$	(22) 4
(3) 35	(13) 3	(23) 2
(4) 9		(24) 3
(5) 1	$(14) \ 3a(x+y+2)$ $(15) \ x^2 - 2x - 3$	(25) 1
(6) 36h + 12g	The second second second second	(26) 3
(7) 3	(16) $x(x + 2)$ or $x^2 + 2x$ (17) $-3x^2 - 11x$	(27) 3
(8) 200	(18) 80	(28) 4
(9) 5.3	(19) 20	(29) 2
(10) 12	(20) 1	(30) 2

[OVER]