

Marker Code		



Candidate Code			

GOVERNMENT OF SĀMOA  
MINISTRY OF EDUCATION, SPORTS & CULTURE

**YEAR 8 NATIONAL EXAMINATION**

**MATHEMATICS**

**2007**

**QUESTION and ANSWER BOOKLET**

TIME ALLOWED: **2 HOURS**

TOTAL MARKS: 100

This Examination is in **TWO** Sections.

Both Sections are **COMPULSORY**.

- ◆ **SECTION A** - **RESTRICTED RESPONSE** **50 MARKS**
- ◆ **SECTION B** - **FREE RESPONSE** **50 MARKS**

**INSTRUCTIONS:**

- ◆ **DO NOT TURN THIS PAGE UNTIL YOU ARE TOLD TO DO SO.**
- ◆ Write your **CANDIDATE CODE** in the right-hand box above and the flap page at the back.
- ◆ Write the **MARKER CODE** in the left-hand box above.
- ◆ Answer **ALL** questions in this Booklet.
- ◆ Mathematical instruments are not needed in this Exam.
- ◆ Check that this Booklet contains pages **1 to 19** plus the flap page.

<b>SECTIONS</b>	<b>MARKS</b>
<b>A</b>	
<b>B</b>	
<b>TOTAL</b>	

## SECTION A:

## RESTRICTED RESPONSE

(50 MARKS)

## Instructions:

- This Section has 50 Multiple Choice Questions.
- Each Question is worth **one mark**.
- Read each Question carefully and choose the answer you think is the **best**.
- Write the **letter** of the answer you choose in the box on the **flap page** at the back of this Booklet.
- If you think the answer is **B**, write the letter in the box like this:
- If you decide to change your answer, put a **CROSS** on your first answer and then write the letter of your second choice beside the box like this:  C .

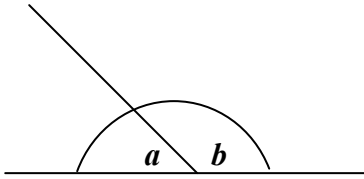
1. The diagram given is an example of a \_\_\_\_\_.



- A. curve  
B. line  
C. point  
D. ray
2. If Keri sleeps for  $1\frac{1}{2}$  hours every afternoon, how many hours does he spend on sleeping for 7 days?
- A.  $7\frac{1}{2}$  hours  
B.  $8\frac{1}{2}$  hours  
C.  $9\frac{1}{2}$  hours  
D.  $10\frac{1}{2}$  hours

3.  $\hat{a} + \hat{b} = 180^\circ$

If  $\hat{a}$  is equal to  $35^\circ$ , what is  $\hat{b}$ ?



- A.  $180^\circ + 35^\circ$
- B.  $180^\circ \times 35^\circ$
- C.  $180^\circ \div 35^\circ$
- D.  $180^\circ - 35^\circ$

4.  $2^3 =$  \_\_\_\_\_.

- A.  $2 \times 3$
- B.  $2 \times 2 \times 2$
- C.  $3 \times 3$
- D.  $3 \times 3 \times 3$

5. 2.45 p.m. on a 24 hour clock is \_\_\_\_\_.

- A. 0245 hours
- B. 1245 hours
- C. 1445 hours
- D. 2245 hours

6. 3 hours 20 minutes + 1 hour 50 minutes = \_\_\_\_\_.

- A. 4 hours 30 minutes
- B. 4 hours 10 minutes
- C. 5 hours 10 minutes
- D. 2 hours 30 minutes

7. Which of these numbers has a square root of 8?

- A. 16
- B. 64
- C. 72
- D. 88

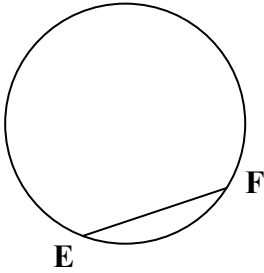
8. What number is **not** divisible by 7?

- A. 28
- B. 35
- C. 56
- D. 78

9.  $1.01 + 2.2 + 3.3 = \underline{\hspace{2cm}}$ .

- A. 6.51
- B. 6.6
- C. 6.05
- D. 6.501

10. In the diagram below  $\overline{EF}$  is the                   .



- A. chord
- B. diameter
- C. radius
- D. segment

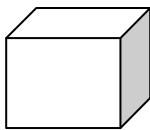
11. 2.63 is read as                   .

- A. two hundred and sixty three
- B. twenty six and three
- C. two point sixty three
- D. two point six three

12. Which angle has the biggest measure?

- A. Acute Angle
- B. Obtuse Angle
- C. Straight Angle
- D. Right Angle

13. How many edges has this cuboid?



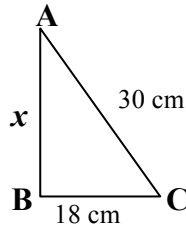
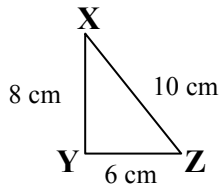
- A. 6
- B. 8
- C. 10
- D. 12

14.  $34 \times 27 = 9 \square$  8. What number must be put in the box to make the answer correct?
- A. 1
  - B. 2
  - C. 3
  - D. 4
15.  $30 + 36 \div 4 = \underline{\hspace{2cm}}$ .
- A. 70
  - B. 66
  - C. 39
  - D. 19
16. Nine hundredths is written as                   .
- A. 0.09
  - B. 0.90
  - C. 90.00
  - D. 900.00
17. The ratio of 6 : 8 is the same as                   .
- A. 1 : 2
  - B. 2 : 3
  - C. 2 : 4
  - D. 3 : 4
18.  $24 + 894 + 365 = \underline{\hspace{2cm}}$ .
- A. 1499
  - B. 1283
  - C. 1273
  - D. 1173
19. Sione paid \$20.00 for a shirt marked \$25.00. What percent of the mark price did Sione pay?
- A. 20%
  - B. 25%
  - C. 75%
  - D. 80%
20. \$1000 is equivalent to                   .
- A. twenty \$5 notes
  - B. five \$20 notes
  - C. ten \$50 notes
  - D. twenty \$50 notes

21. The number “n” has only two factors.  
“n” can only be \_\_\_\_\_.

A. 27  
B. 21  
C. 17  
D. 6

Use the diagrams to answer Questions 22 and 23.



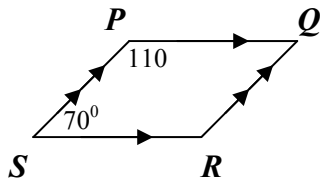
22.  $\triangle ABC$  is an enlargement of  $\triangle XYZ$ . What is the **scale factor** used?

A. 2  
B. 3  
C. 4  
D. 5

23. What is the value of ‘x’?

A. 90 cm  
B. 46 cm  
C. 24 cm  
D. 12 cm

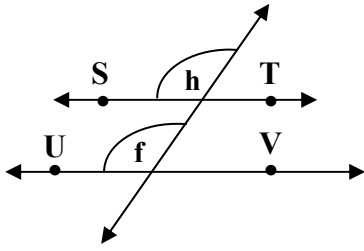
24. **PQRS** is a parallelogram.  $\hat{P} = 110^\circ$  and  $\hat{S} = 70^\circ$ .  
Therefore  $\hat{Q} =$  \_\_\_\_\_.



A.  $35^\circ$   
B.  $70^\circ$   
C.  $110^\circ$   
D.  $180^\circ$

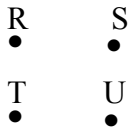
25. The **best unit** to measure the length of your Mathematics Exercise book is \_\_\_\_\_.
- A. millimetre
  - B. centimetre
  - C. metre
  - D. kilometre
26. 0.5 km is the same as \_\_\_\_\_ metres.
- A. 5
  - B. 50
  - C. 500
  - D. 5000
27. Change 125% to a decimal.
- A. 125.0
  - B. 1.25
  - C. 12.5
  - D. 0.125
28. In the number 34.12 which digit stands for **tenth**?
- A. 1
  - B. 2
  - C. 3
  - D. 4
29.  $2 \times 10^2 + 2 \times 10^1 + 2 \times 10^0 =$  \_\_\_\_\_.
- A. 222
  - B. 22.2
  - C. 2.22
  - D. 0.222
30. The movie started at 10.45 a.m. and finished at 1.15 p.m. How long was the movie?
- A. 11 hours 30 minutes
  - B. 9 hours 30 minutes
  - C. 3 hours 30 minutes
  - D. 2 hours 30 minutes

31. In the diagram below,  $\overleftrightarrow{ST}$  is parallel to  $\overleftrightarrow{UV}$ . Therefore, **angle h** and **angle f** are equal because they are \_\_\_\_\_.



- A. alternate  
 B. corresponding  
 C. co-interior  
 D. vertically opposite

32.



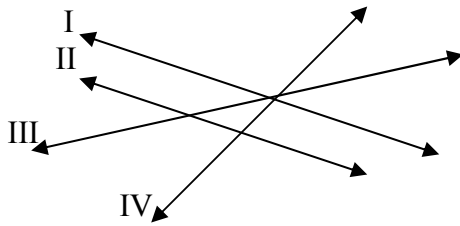
Tim drew the line segments RT, RU, and SU. Which letter did Tim draw?

- A. H  
 B. M  
 C. N  
 D. X
33.  $3 \times a = 42$ .  
 $a =$  \_\_\_\_\_.
- A. 14  
 B. 39  
 C. 45  
 D. 126

34.  $1000 \times 0.05 =$  \_\_\_\_\_.

- A. 0.005  
 B. 0.05  
 C. 50  
 D. 500

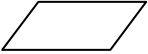
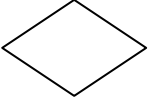
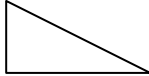
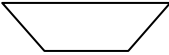
Use the diagram below to answer Question 35.



35. Which are the two parallel lines?

- A. I & II
- B. I & III
- C. II & III
- D. I & IV

36. Which diagram is **NOT** a quadrilateral?

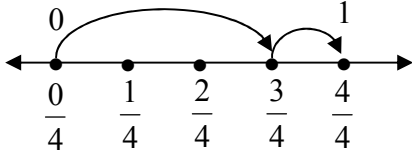
- A. 
- B. 
- C. 
- D. 

37. Replace letter “n” with a number to make the statement correct.

$$+25 + \mathbf{n} = +7$$

- A. +32
- B. -32
- C. +18
- D. -18

38.



Which equation is shown on the number line?

A.  $\frac{0}{4} + \frac{3}{4} = \frac{4}{4} = 1$

B.  $\frac{2}{4} + \frac{2}{4} = \frac{4}{4} = 1$

C.  $\frac{3}{4} + \frac{1}{4} = \frac{4}{4} = 1$

D.  $\frac{4}{4} + \frac{0}{4} = \frac{4}{4} = 1$

39. Rearrange these numbers, from the largest to the smallest.

1.011, 1.11, 1.1, 1.01

A. 1.01, 1.11, 1.1, 1.011

B. 1.11, 1.1, 1.011, 1.01

C. 1.011, 1.11, 1.01, 1.1

D. 1.1, 1.011, 1.01, 1.11

40. There are 30 pupils in Olita's class. In **base five**, the number of pupils is \_\_\_\_\_.

A. 110

B. 30

C. 15

D. 11

41. Which one of the following number sentences shows the **Associative Property of Multiplication**?

A.  $(12 \times 6) \times 10 = 12 \times (6 \times 10)$

B.  $18 \times 12 = (10 \times 12) + (8 \times 12)$

C.  $24 \times 8 = 8 \times 24$

D.  $25 \times 1 = 25$

42. Sara had spent half of her pocket money. She had \$2.50 left. How much was her pocket money?

A. \$1.25

B. \$3.75

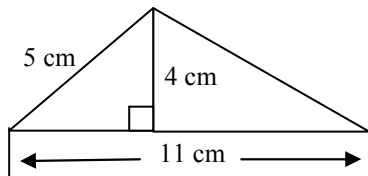
C. \$5.00

D. \$6.25

43.  $x + x + x + x = \underline{\hspace{2cm}}$

- A.  $x^4$
- B.  $4x$
- C.  $4 + x$
- D.  $4^x$

44. What is the area of the triangle below?



- A.  $10 \text{ cm}^2$
- B.  $20 \text{ cm}^2$
- C.  $22 \text{ cm}^2$
- D.  $44 \text{ cm}^2$

45. A number machine gave the results below.

INPUT	1	2	3	4	5	10
OUTPUT	0	3	6	9	12	

If the Input was 10, what would be the output?

- A. 21
- B. 27
- C. 30
- D. 33

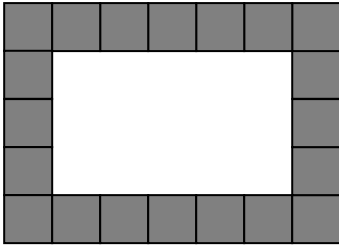
Use the information below to answer Question 46.

**Sila is 12 years old. His mother's age is 3 times his age.**

46. How old is Sila's mother?

- A. 9 years
- B. 15 years
- C. 24 years
- D. 36 years

47. Sara helped her father put tiles round the edge of the floor like this.

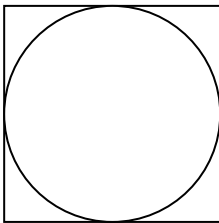


How many more of these tiles would it take to cover the whole floor?

- A. 8  
B. 15  
C. 20  
D. 21
48. What is the **Lowest Common Multiples** (LCM) of 5 and 6?

- A. 30  
B. 18  
C. 15  
D. 9

- 49.



The length of one side of the square is 6 cm. What is the radius of the circle?

- A. 2 cm  
B. 3 cm  
C. 4 cm  
D. 6 cm
50. Siva walks 200 metres in 5 minutes. At the same speed, how far can he walk in 1 hour?
- A. 40 m  
B. 100 m  
C. 2000 m  
D. 2400 m

## SECTION B:

## FREE RESPONSE

(50 MARKS)

This Section is in TWO Parts.

Part ONE:	True and False	5 marks
Part TWO:	Extended Answers	45 marks

## PART ONE:

## TRUE OR FALSE

5 MARKS

**Instructions:**

- Read each statement on the left.
- Write "T" if the statement is TRUE and "F" if the statement is FALSE in the spaces provided for the answer.

	STATEMENT	ANSWER
1.	When two odd numbers are multiplied, the answer is always an odd number.	_____ (1 mark)
2.	A prime number has two or more factors.	_____ (1 mark)
3.	$10^0 = 1$	_____ (1 mark)
4.	A diameter is equal to the sum of two radii.	_____ (1 mark)
5.	When you multiply a <b>number by one</b> , the answer is always that number.	_____ (1 mark)

Part One =



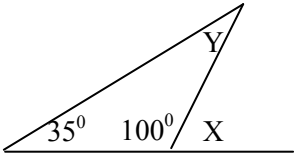
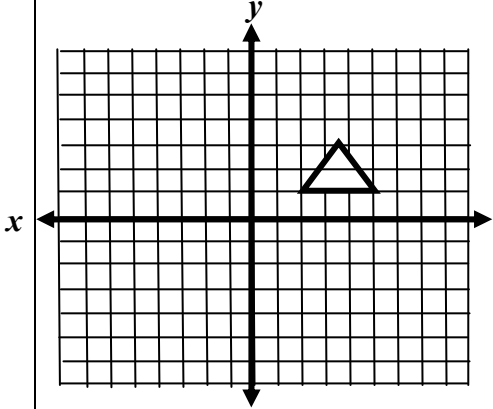
## PART TWO:

## EXTENDED ANSWERS

(45 MARKS)

**Instructions:**

- Show your working for all questions in the column for working.
- Write your answers clearly in the spaces provided for answers.

	QUESTIONS	WORKING
6.	Draw a ray and label it <b>AB</b> using the correct symbol.	<p>Ans: _____</p> <p>(2 marks)</p>
7.	Find the missing angles. <div style="text-align: center; margin: 10px 0;">  </div>	<p>Ans: <math>X =</math> _____</p> <p>(1 mark)</p> <p>Ans: <math>Y =</math> _____</p> <p>(1 mark)</p>
8.	Reflect the triangle on line 'x'. Draw the image.	<div style="text-align: center; margin: 10px 0;">  </div> <p>(2 marks)</p>

P14

9.	Of a class of 50 students, 15 were weeding the garden, 10 were sweeping the rooms and 25 were cutting the grass. What <b>percentages</b> of the class were <b>weeding</b> the garden?	<b>Ans:</b> Weeding: _____ % <b>(2 marks)</b>
10.	If 3.23 m of rope is cut from 11.2 m length of rope, what length of rope is left?	<b>Ans:</b> _____ <b>(2 marks)</b>
11.	$2520 \div 12$	<b>Ans:</b> _____ <b>(2marks)</b>
12.	Three students had lunch at the MacDonal, and their total bill was \$22.35. How much would each one pay if they were to pay the same amount?	<b>Ans:</b> _____ <b>(2 marks)</b>

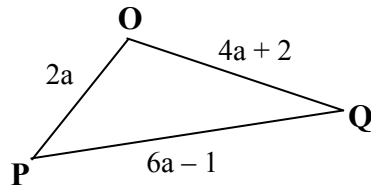
13.

$$\left(4\frac{1}{2} - 1\frac{3}{4}\right) \div 2\frac{1}{8} =$$

Ans: \_\_\_\_\_  
(3 marks)

14.

What is the perimeter of the  $\triangle OPQ$ ?



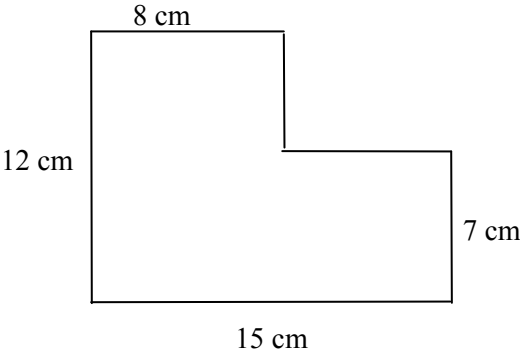
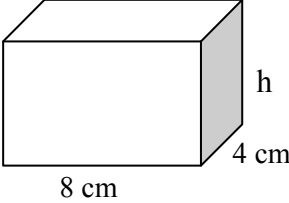
Ans: P = \_\_\_\_\_  
(2 marks)

15.

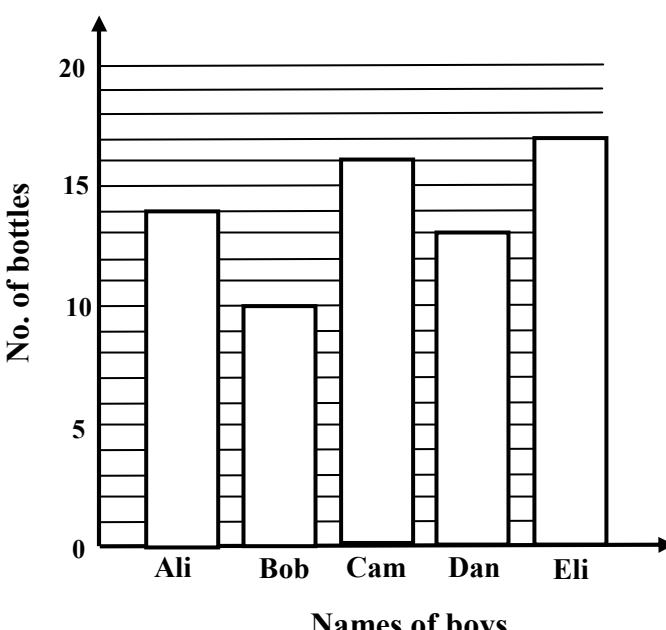
Complete the table

Kilograms	Pounds (lb)
1	2.2
2	4.4
10	

Ans: \_\_\_\_\_  
(1 mark)

16.	<p>Find the area of the shape given below.</p> 	<p>Ans: _____ (4 marks)</p>
17.	<p><math>1.3 \text{ m} + 102 \text{ cm} + 2.2 \text{ m} = \text{_____} \text{ (cm)}</math>. Give your answer in <b>centimetres</b>.</p>	<p>Ans: cm = _____ (2 marks)</p>
18.	<p>The volume of the box is <math>64 \text{ cm}^3</math>. If the length is 8 cm and the breadth is 4 cm, what is the height of the box?</p> <div style="border: 1px solid black; padding: 5px; width: fit-content; margin: 10px auto;"> <p><b>Volume = LBH = <math>64 \text{ cm}^3</math></b></p> </div> 	<p>Ans: H = _____ (3 marks)</p>

19.	If there are 5 boxes containing 10 balls each and 6 boxes containing 8 balls each, what is the total number of balls in the boxes?	<p>Ans: No. of balls = _____</p> <p><b>(3 marks)</b></p>
20.	$101_{two} + 111_{two} + 11_{two} = \text{_____}_{two}$	<p>Ans: _____<sub>two</sub></p> <p><b>(1 mark)</b></p>
21.	Ken had \$900.00. He divided the amount among his three children Mata, Tama and Sama in the ratio of 3:2:1. How much did Tama get?	<p>Ans: _____</p> <p><b>(3 marks)</b></p>

22.	<p>A coin is tossed two times.</p> <p>(i) List the possible outcomes</p> <p>(ii) What is the <b>probability</b> of getting two heads (<b>HH</b>)?</p>	<p>Ans: (i) _____</p> <p style="text-align: center;"><b>(2 marks)</b></p> <p>Ans: (ii) _____</p> <p style="text-align: center;"><b>(1 mark)</b></p>
23.	<p>What is the <b>median</b> score for the sequence 5; 4; 2; 3; 6; 9; 6?</p>	<p style="text-align: center;">_____</p> <p style="text-align: center;"><b>(2 marks)</b></p>
24.	<p>Use the graph to answer question 24.</p>  <p>(i) Who collected the most bottles?</p> <p>(ii) What is the <b>average</b> number of bottles the boys collected?</p>	<p>Ans: (i) _____</p> <p style="text-align: center;"><b>(1 mark)</b></p> <p>Ans: (ii) _____</p> <p style="text-align: center;"><b>(3 marks)</b></p>

Candidate Code			

**SECTION A:**

**RESTRICTED RESPONSE**

**(50 MARKS)**

**Instructions:**

- Answer Questions 1 – 50 on this page.
- If you think the answer is **B**, write the letter in the box like this: 

<b>B</b>
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- If you decide to change your answer, put a **CROSS** on your first answer and then write the letter of your second choice beside the box like this: 

<del>B</del>
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 C.

1. <input style="width: 50px; height: 30px;" type="text"/>	11. <input style="width: 50px; height: 30px;" type="text"/>	21. <input style="width: 50px; height: 30px;" type="text"/>	31. <input style="width: 50px; height: 30px;" type="text"/>	41. <input style="width: 50px; height: 30px;" type="text"/>
2. <input style="width: 50px; height: 30px;" type="text"/>	12. <input style="width: 50px; height: 30px;" type="text"/>	22. <input style="width: 50px; height: 30px;" type="text"/>	32. <input style="width: 50px; height: 30px;" type="text"/>	42. <input style="width: 50px; height: 30px;" type="text"/>
3. <input style="width: 50px; height: 30px;" type="text"/>	13. <input style="width: 50px; height: 30px;" type="text"/>	23. <input style="width: 50px; height: 30px;" type="text"/>	33. <input style="width: 50px; height: 30px;" type="text"/>	43. <input style="width: 50px; height: 30px;" type="text"/>
4. <input style="width: 50px; height: 30px;" type="text"/>	14. <input style="width: 50px; height: 30px;" type="text"/>	24. <input style="width: 50px; height: 30px;" type="text"/>	34. <input style="width: 50px; height: 30px;" type="text"/>	44. <input style="width: 50px; height: 30px;" type="text"/>
5. <input style="width: 50px; height: 30px;" type="text"/>	15. <input style="width: 50px; height: 30px;" type="text"/>	25. <input style="width: 50px; height: 30px;" type="text"/>	35. <input style="width: 50px; height: 30px;" type="text"/>	45. <input style="width: 50px; height: 30px;" type="text"/>
6. <input style="width: 50px; height: 30px;" type="text"/>	16. <input style="width: 50px; height: 30px;" type="text"/>	26. <input style="width: 50px; height: 30px;" type="text"/>	36. <input style="width: 50px; height: 30px;" type="text"/>	46. <input style="width: 50px; height: 30px;" type="text"/>
7. <input style="width: 50px; height: 30px;" type="text"/>	17. <input style="width: 50px; height: 30px;" type="text"/>	27. <input style="width: 50px; height: 30px;" type="text"/>	37. <input style="width: 50px; height: 30px;" type="text"/>	47. <input style="width: 50px; height: 30px;" type="text"/>
8. <input style="width: 50px; height: 30px;" type="text"/>	18. <input style="width: 50px; height: 30px;" type="text"/>	28. <input style="width: 50px; height: 30px;" type="text"/>	38. <input style="width: 50px; height: 30px;" type="text"/>	48. <input style="width: 50px; height: 30px;" type="text"/>
9. <input style="width: 50px; height: 30px;" type="text"/>	19. <input style="width: 50px; height: 30px;" type="text"/>	29. <input style="width: 50px; height: 30px;" type="text"/>	39. <input style="width: 50px; height: 30px;" type="text"/>	49. <input style="width: 50px; height: 30px;" type="text"/>
10. <input style="width: 50px; height: 30px;" type="text"/>	20. <input style="width: 50px; height: 30px;" type="text"/>	30. <input style="width: 50px; height: 30px;" type="text"/>	40. <input style="width: 50px; height: 30px;" type="text"/>	50. <input style="width: 50px; height: 30px;" type="text"/>

**TOTAL =**

	<b>50</b>
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