1. Find the value of $2,568-2,025\times18+2,025\times17$. **(2.5 Marks)**

2. Given that

   $A=2\times2\times3\times m$ and

   $B=2\times3\times3\times m$.

   If the LCM of A and B is 468, find the value of $\frac{B-A}{m}$. **(2.5 Marks)**

3. Find the value of $\dfrac{2\frac{1}{4}+4\frac{1}{5}\times2\frac{1}{7}}{1\frac{1}{8}}$. **(2.5 Marks)**

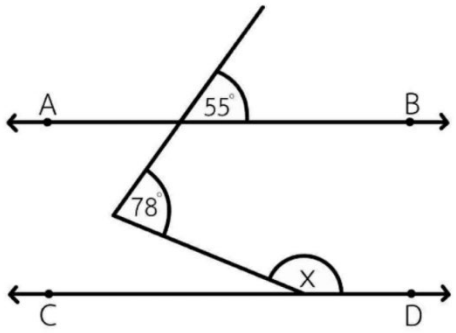
4. What is the greatest natural number that divides 2025 and 2568 leaving the remainder 70 and 222, respectively? **(2.5 Marks)**

5. From the pattern $8,\ 11,\ 17,\ 35,\ 107,\ \ldots$, what is the next number? **(2.5 Marks)**

6. What is 12% of 40% of $2,500$? **(2.5 Marks)**

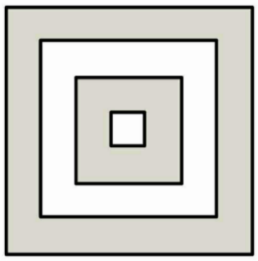
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7. From the diagram, $\overleftrightarrow{AB} \parallel \overleftrightarrow{CD}$.



What is the measure of angle X? **(2.5 Marks)**

8. From the figure, there are squares with side lengths of 2, 6, 12, and 18 centimeters placed one on top of the other, respectively.



What is the area of the shaded region? **(2.5 Marks)**

9. Let $AB5C$ be the 4-digit number that, when multiplied by 4, results in the 5-digit number $1DBA2$ as shown below.

$$\begin{array}{r} AB5C \\ \times \quad 4 \\ \hline 1DBA2 \end{array}$$

If A, B, C and D are different digits, then what is the value of $(C - D \div A) \times B$?

(4.5 Marks)

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10. What is the difference between the maximum 3-digit prime number and the minimum 3-digit prime number? **(4.5 Marks)**

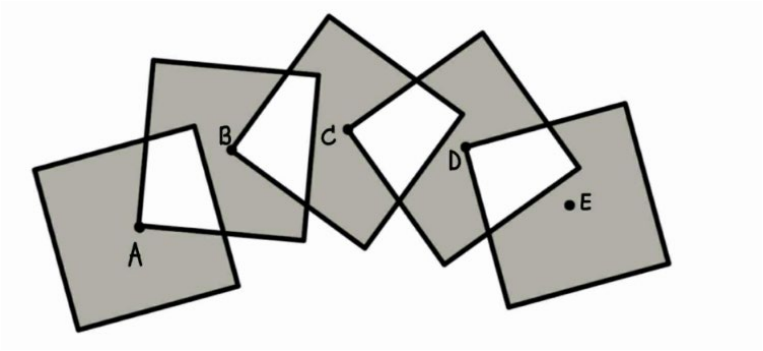
11. Given that numbers $3\frac{2}{5}$, 4.795, $3\frac{5}{8}$, 3.25, $4\frac{4}{5}$. The product of the smallest number and the greatest number is $a\frac{b}{c}$, where $\frac{b}{c}$ is the simplest form. Find the value of $(a+b)-(a-c)$. **(4.5 Marks)**

12. Praewa has some chickens and ducks. If Praewa sells $\frac{1}{5}$ of her chickens, 116 chickens remain. If she sells 12% of her ducks, 132 ducks remain. How many chickens and ducks did Praewa initially have in total? **(4.5 Marks)**

13. There are six teachers who are of different ages. If the average age of the five oldest teachers is 45 years, and the average age of the five youngest teachers is 40 years, what is the age difference between the oldest teacher and the youngest teacher? **(4.5 Marks)**

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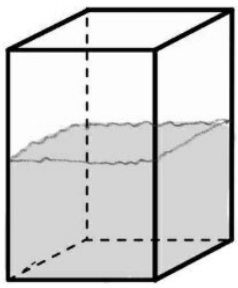
14. There are 5 equally sized squares overlapping each other, where A, B, C, D and E the midpoints of each square, respectively, as shown in the figure.



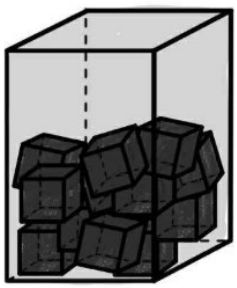
If each square has a side length of 16 centimeters, find the area of the shaded region.

(4.5 Marks)

15. A rectangular water tank has a base that is 4 feet wide and 6 feet long. The tank contains water up to half its height. If 12 cubes, each with a volume of 8 cubic feet, are placed into the tank, the water level will rise to the top of the tank as shown below.



Before placing cubes



After placing 12 cubes

From the above information, what is the height in inches of the tank?

(4.5 Marks)

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16. Eden has one pair of rabbits that mate in the first month. One month after mating, the female rabbit will give birth to another pair of rabbits (male and female), and this new pair of rabbits will mate again. Assume that newly born rabbit pairs will take one month to mature enough to mate. None of the rabbits died. How many rabbits would there be after a year?

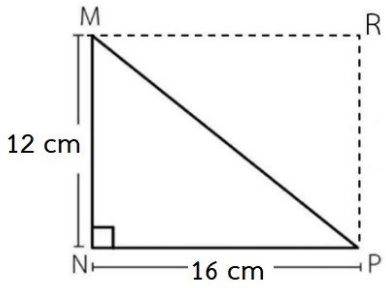
    How many rabbits are there after one year? **(6 Marks)**

17. If $\frac{1}{1+2}+\frac{1}{1+2+3}+\frac{1}{1+2+3+4}+\ldots+\frac{1}{1+2+3+\ldots+49}=\frac{a}{a+1}$,

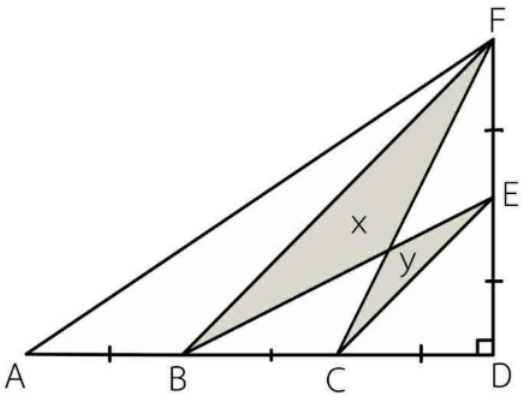
    then what is the value of $6+7+8+\ldots+(a-2)+(a-1)+a$? **(6 Marks)**

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18. From the diagram, the area of the triangle $MNP = \frac{12\times16}{2} = \frac{192}{2} = 96$ cm^2, which is a half of the rectangular $MNPR$.



The triangle ADF is the right triangle that $AB = BC = CD = DE = EF = 24$ cm.



Let x and y be the area of shaded regions as shown below.

Find the value of $x - y$. **(6 Marks)**

19. How many 4-digit natural numbers can be formed under the following conditions:

i. No repeated digits.

ii. No digits are $0, 3$ or 5.

iii. The number is divisible by 3 and 4.

iv. The number has a remainder of 2 when divided by 5. **(6 Marks)**

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20. The table below shows the number of students in years $4-6$ of ASMOPSS THAILAND School.

Year	The number of students ASMOPSS THAILAND School		
	male	female	total
Year 4	248	B	E
Year 5	327	C	621
Year 6	A	225	F
total	831	D	1,565

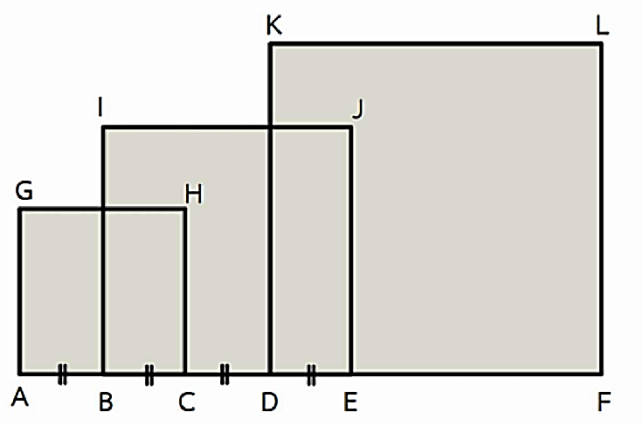
Some data in the table is missing, and the missing data is represented by A, B, C, D, E and F. What is the value of $A-B-C+D-E+F$? **(6 Marks)**

21. If $A \boxtimes B = 2A - B$, then find the value of $[(4 \boxtimes 3) \boxtimes 2] \boxtimes 1$. **(2.5 Marks)**

22. A shopkeeper sells a watch for 448 baht and loses 20%. If he wants to sell this watch for a 20% profit, what is the selling price? **(4.5 Marks)**

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23. From the diagram, $\square ACHG$, $\square BEJI$ and $\square DFLK$ are squares having area 16, 36 and $64\,\text{cm}^2$, respectively.



If $AB = BC = CD = DE$, then find the perimeter of shaded region. **(4.5 Marks)**

24. Kevin has 5 oranges. He wants to distribute oranges among 3 children, with each child getting at least one orange. How many different ways can Kevin distribute the oranges? **(2.5 Marks)**

25. How many three-digit natural numbers are there that are divisible by 11, where the hundreds digit is odd? **(4.5 Marks)**

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GRADE 6 ANSWER KEY

No.	Answer	No.	Answer
1	543	14	768
2	6	15	96
3	10	16	466
4	391	17	285
5	467	18	288
6	120	19	18
7	157	20	499
8	212	21	15
9	40	22	672
10	896	23	44
11	8	24	6
12	295	25	45
13	25		

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