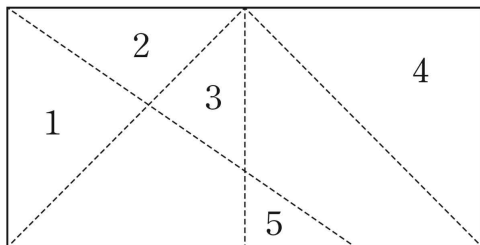


2022 Eye Level MATH Olympiad [Grade2]

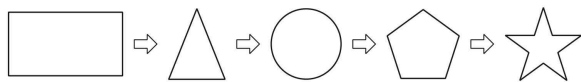
No.	Answer	No.	Answer	No.	Answer	No.	Answer	No.	Answer
1	②	11	①	21	④	31	15	41	5
2	①	12	②	22	⑤	32	8	42	②
3	⑤	13	⑤	23	③	33	9	43	6
4	③	14	①	24	③	34	14	44	①
5	④	15	①	25	⑤	35	43	45	12
6	③	16	②	26	③	36	6	46	③
7	③	17	④	27	②	37	20	47	9
8	⑤	18	②	28	④	38	17	48	④
9	④	19	①	29	①	39	211	49	16
10	①	20	②	30	④	40	88	50	6

[Sol]

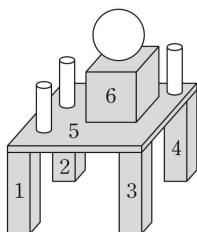
41. 5 triangles



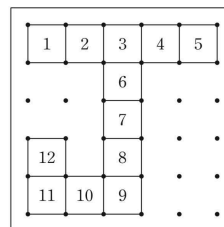
42.



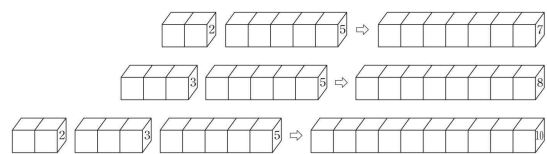
43.



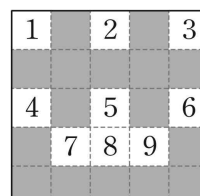
45.



46.

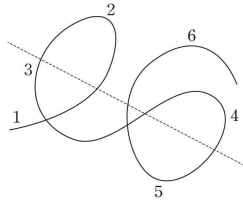


47.



49. $1 + \boxed{1} = 2$, $2 + \boxed{2} = 4$, $4 + \boxed{3} = 7$,
 $7 + \boxed{4} = 11$ $\therefore 11 + \boxed{5} = 16$

50. It makes 6 strings.



2022 Eye Level MATH Olympiad [Grade3]

No.	Answer	No.	Answer	No.	Answer	No.	Answer	No.	Answer
1	②	11	③	21	③	31	13	41	2
2	③	12	①	22	⑤	32	62	42	86
3	④	13	②	23	①	33	163	43	13
4	①	14	①	24	④	34	111	44	11
5	④	15	⑤	25	①	35	313	45	③
6	④	16	②	26	④	36	26	46	①
7	②	17	③	27	⑤	37	285	47	②
8	③	18	④	28	①	38	162	48	10
9	⑤	19	⑤	29	②	39	456	49	③
10	③	20	②	30	⑤	40	64	50	15

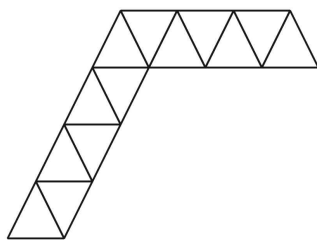
【Sol】

42. The number added repeatedly is 7.

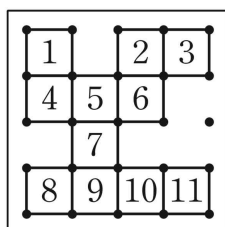
$$A = 29 + 7 = 36, B = 43 + 7 = 50$$

$$A + B = 36 + 50 = 86$$

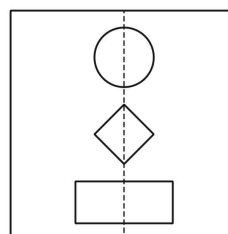
43. The triangles increase by 4. So the forth figure has 13 triangles



44.



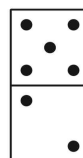
46.



47. The number of squares of the example is 18.

① 19 ② 18 ③ 17 ④ 17

48.



$$A = 5, B = 2$$

$$\therefore A \times B = 5 \times 2 = 10$$

49. The colors are alternately black and white. The number follows the rules of (1), (1, 2), (1, 2, 3), (1, 2, 3, 4), ...

50. Even if the month has either 28 days or 31 days, the third Friday is always 15th.

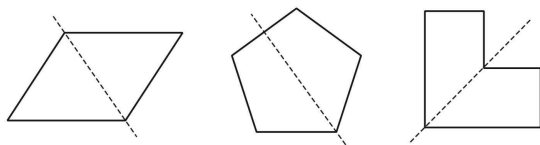
Sun	Mon	Tue	Wed	Thu	Fri	Sat
					1	2
3	4	5	6	7	8	9
10	11	12	13	14	15	16
17	18	19	20	21	22	23
24	25	26	27	28	29	30

2022 Eye Level MATH Olympiad [Grade4]

No.	Answer	No.	Answer	No.	Answer	No.	Answer	No.	Answer
1	185	11	19	21	37	31	18	41	3
2	304	12	21	22	45	32	72	42	④
3	2432	13	19	23	32	33	744	43	7
4	2496	14	16	24	41	34	60	44	②
5	31042	15	27	25	22	35	888	45	17
6	385558	16	26	26	3	36	12	46	12
7	10	17	33	27	3	37	6	47	③
8	12	18	235	28	5	38	14	48	19
9	13	19	122	29	17	39	15	49	24
10	15	20	547	30	97	40	3	50	15

[Sol]

41.



42. The number of squares of the example is 12.

- ① 13 ② 14 ③ 13 ④ 12

43. $42 \div 6 = 7$

45. The relationship between A, B, and C is $3A + B = C$.

So the missing number is 17

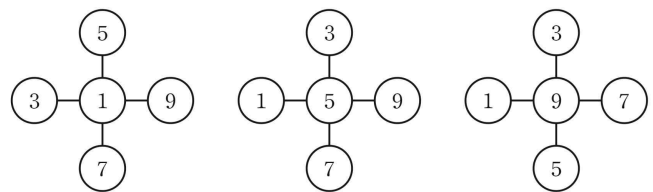
46. A given pattern appears 6 times each, 12 times in total.

48. The people are placed at the both ends of each interval. So the number of people is $72 \div 4 + 1 = 19$.

49. 11 cube blocks were used on the first floor, 7 on the second floor, and 6 on the third floor.

$$11 + 7 + 6 = 24$$

50.



The numbers that can come to the A position are 1, 5, and 9.

$$1 + 5 + 9 = 15$$

2022 Eye Level MATH Olympiad [Grade5]

No.	Answer	No.	Answer	No.	Answer	No.	Answer	No.	Answer
1	4602	11	14	21	24	31	432	41	④
2	17856	12	25	22	18	32	16	42	909
3	20	13	33	23	24	33	24	43	15
4	14	14	69	24	1	34	8	44	2
5	17	15	14	25	2	35	6	45	③
6	29	16	202	26	4	36	292	46	29
7	71	17	122	27	216	37	63	47	30
8	114	18	164	28	698	38	150	48	9
9	142	19	743	29	9	39	15	49	11
10	719	20	35	30	13	40	123	50	20

【Sol】

43.

Sun	Mon	Tue	Wed	Thu	Fri	Sat
					1	2
3	4	5	6	7	8	9
10	11	12	13	14	15	16
17	18	19	20	21	22	23
24	25	26	27	28	29	30
31						

44. Either ¹ or ³ is the digit that should be taken away. The numbers that can be formed with the remaining digits are 133 and 333.

46. 2-digit symmetric numbers :

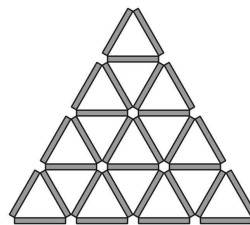
11, 22, 33, 44, 55, 66, 77, 88, 99

3-digit symmetric numbers : 1□1,
2□2

Each □ can contain a number from 0 to 9.

$$9 + 10 + 10 = 29$$

47.



48. first biggest score is $5 + 5 + 5 = 15$
second biggest score is
 $5 + 5 + 2 = 12$
third biggest score is $5 + 5 + 1 = 11$
forth biggest score is $5 + 2 + 2 = 9$

49. 1×1 squares : 7

2×2 squares : 3

3×3 squares : 1

50. $6 + 2 + C = 3 + B + C$

$$B = 5, 6 + 2 + C = 6 + A + 3$$

$$C = A + 1$$

Among numbers less than 9, the number available is 1, 4, 7, 8

$$A = 7, C = 8$$

$$\therefore A + B + C = 7 + 5 + 8 = 20$$

2022 Eye Level MATH Olympiad [Grade6]

No.	Answer	No.	Answer	No.	Answer	No.	Answer	No.	Answer
1	12	11	39	21	17	31	5	41	①
2	15	12	32	22	7	32	37	42	9
3	21	13	27	23	3	33	20	43	③
4	34	14	906	24	13	34	86	44	11
5	67	15	122	25	19	35	99	45	18
6	90	16	736	26	2	36	55	46	31
7	36	17	90	27	8	37	9	47	187
8	26	18	41	28	78	38	78	48	44
9	41	19	94	29	48	39	23	49	16
10	50	20	14	30	44	40	8	50	10

[Sol]

42. When you attempt to multiply 3 by itself multiple times, the digits in the ones place of the products are as below:

Number of times multiplied	1	2	3	4	5	...
Number in the one place	3	9	7	1	3	...

As shown above, the numbers 3, 9, 7, and 1 are being repeated in the ones place.

43.

	dog	cat	hamster	bird
Amelia	○	×	×	×
Peterson	×	○	×	×
Sally	×	×	×	○
Terry	×	×	○	×

44. ○ = 16, △ = 5 or ○ = 5, △ = 16

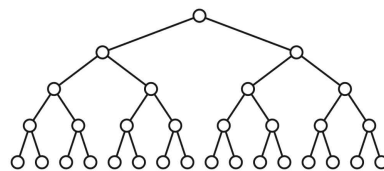
The difference of ○ and △ is
 $16 - 5 = 11$

45. The Saturday dates must each be a multiple of 7.

Sun	Mon	Tue	Wed	Thu	Fri	Sat
1	2	3	4	5	6	7
8	9	10	11	12	13	14
15	16	17	18	19	20	21
22	23	24	25	26	27	28
29	30					

Even if the month has either 28 days or 31 days, the third Wednesday is always 18th.

46.



47. ☆ + ☆ + ☆ = 15, ☆ = 5

$$\triangle + \triangle + \star = 19, \triangle = 7$$

$$\triangle + \star + \diamond = 14, \diamond = 2$$

$$A = \diamond + \diamond + \triangle = 11$$

$$B = \star + \star + \triangle = 17$$

The product of A and B is

$$11 \times 17 = 187$$

48. 2-digit number :

12, 13, 20, 21, 23, 30, 31, 32

3-digit number :

1□□, 2□□, 3□□

1□□ two of 0, 2, 3 cards can be used for □.

102, 103, 120, 123, 130, 132

2□□, 3□□ is the same as 1□□

4-digit number :

1□□□, 2□□□, 3□□□

1□□□ three of 0, 2, 3 cards can be used for □.

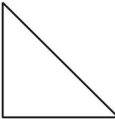
1023, 1032, 1203, 1230, 1302, 1320

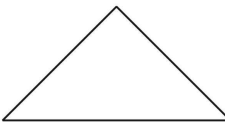
2□□□, 3□□□ is the same as 1□□□

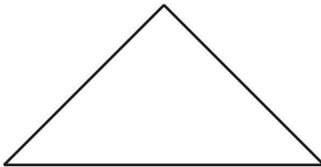
$\therefore 8 + 6 \times 3 + 6 \times 3 = 44$

49.

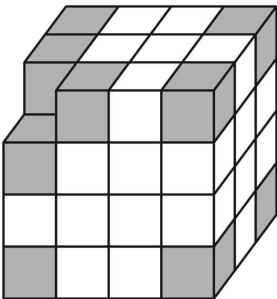
 triangles : 4

 triangles : 4

 triangles : 4

 triangles : 4

50.



$\therefore 10$ pieces

2022 Eye Level MATH Olympiad [Grade7]

No.	Answer	No.	Answer	No.	Answer	No.	Answer	No.	Answer
1	69	11	245	21	23	31	14	41	②
2	63	12	180	22	5	32	24	42	④
3	37	13	225	23	44	33	11	43	30
4	17	14	13	24	8	34	40	44	15
5	73	15	9	25	7	35	387	45	5
6	17	16	5	26	503	36	19	46	③
7	538	17	6	27	6	37	99	47	3
8	7	18	7	28	16	38	76	48	10
9	14	19	5	29	97	39	13	49	5
10	6	20	7	30	58	40	175	50	10

[Sol]

41.



42. Statement (1) says that Clara crossed the finish line for the second or third time and Edward crossed the finish line for the third or forth time.

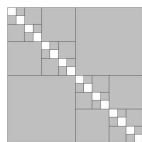
Statement (2) says that Helen crossed the finish line for the third time.

So the order of crossing the finish line is as follows.

Richard-Clara-Helen-Edward

Therefore, the winner is Richard.

43. $2 + 4 + 8 + 16 = 30$



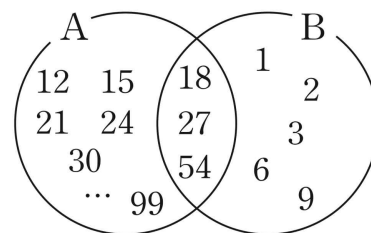
44. $A = 2, B = 7, C = 6 \therefore A + B + C = 15$

45. To have the least value, you have to divide it by the largest number, 8.

$$2 \div 4 \div 8 \times 6 = 5 \quad 2 \times 4 \div 8 \div 6 = 7$$

Therefore, the least value is 5.

47. The numbers that go in the shaded area are multiple of 3 (2-digit) and the positive divisor of 54. So, they are 18, 27, 54. They are 3 numbers.



48. $\square\square 0$ two of 1, 2, 3 cards can be used for $\square$

$\rightarrow 120, 130, 210, 230, 310, 320$

$1\square 2$ one of 0, 3 cards can be used for $\square$.

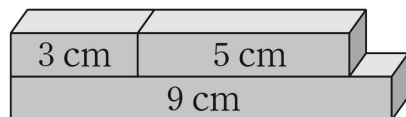
$\rightarrow 102, 132$

$3\square 2$ is the same as $1\square 2$

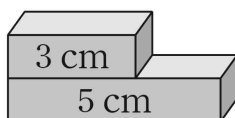
$$\therefore 6 + 2 \times 2 = 10$$

49. $642 \div 3$, $462 \div 3$, $632 \div 4$, $432 \div 6$,
 $342 \div 6$

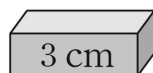
50. $1 = 9 - (3 + 5)$



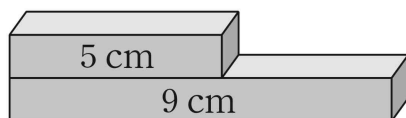
$2 = 5 - 3$



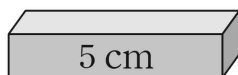
3



$4 = 9 - 5$



5



$6 = 9 - 3$

$7 = (9 - 5) + 3$

$8 = 3 + 5$

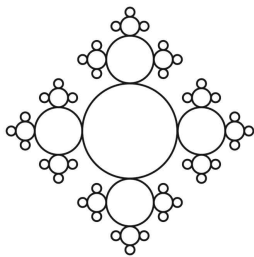
Therefore, the answer is 10 cm.

2022 Eye Level MATH Olympiad [Grade8]

No.	Answer	No.	Answer	No.	Answer	No.	Answer	No.	Answer
1	19	11	11	21	38	31	12	41	53
2	17	12	7	22	25	32	7	42	80
3	13	13	5	23	888	33	48	43	8
4	17	14	3	24	492	34	45	44	②
5	2	15	10	25	37	35	63	45	11
6	19	16	5	26	22	36	22	46	④
7	23	17	23	27	-13	37	51	47	6
8	3	18	19	28	-10	38	314	48	16
9	5	19	1	29	628	39	11	49	23
10	2	20	23	30	8	40	216	50	631

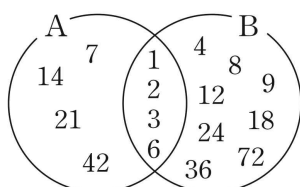
【Sol】

41. $1 + 4 + 12 + 36 = 53$



42. 1st row: $8 \div 2 = 4$, $8 \times 4 = 32$
 2nd row: $6 \div 2 = 3$, $6 \times 3 = 18$
 3rd row: $12 \div 6 = 2$, $12 \times 2 = 24$
 So, $A = 15 \times (15 \div 3) = 75$
 $B = 5$ since $10 \div B = 2$
 $A + B = 80$

43. The numbers that go in the shaded area are the positive divisor of 72 but not the positive divisor of 42.
 So, they are 4, 8, 9, 12, 18, 24, 36, 72. They are 8 numbers.



45. The numbers that can be represented by the product of two different numbers are $6 (= 2 \times 3)$ and $8 (= 2 \times 4)$.

The number on Arthur's card is odd, so the number is 3.

The number on Carrie's card is 2, and Samuel's card is 6.

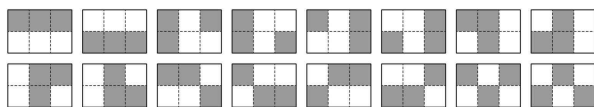
$$3 + 2 + 6 = 11$$

46. It should be this.



47. $7 \times 6 \times 5 = 210$,
 $7 \times 6 \times 4 = 168$,
 $7 \times 6 \times 3 = 126$,
 $7 \times 5 \times 4 = 140$,
 $7 \times 5 \times 3 = 105$,
 $6 \times 5 \times 4 = 120$

48.



$\therefore 16$ ways

49. $5\overline{B} - B \times C = 2$

So, $B = 6, C = 9$ or $B = 8, C = 7$

Then, $AB - C \times C = 5$ determines

$B = 6, C = 9$

$$\begin{array}{r} 96 \\ 9 \overline{) 866} \\ \underline{81} \\ 56 \\ \underline{54} \\ 2 \end{array}$$

$A = 8, B = 6, C = 9 \therefore A + B + C = 23$

50. $168 = 7 \times 24, 54 = 9 \times 6, 40 = 5 \times 8$

7 in column 1, 9 in column 2, and

5 in column 3. $23 = 9 + 8 + 6$

9, 8, and 6 must be in the same row.

Since 40 is not a multiple of 6, 6 goes into column 1.

6	9	8	23
	B		12
		C	10
168	54	40	

4 in column 1, 2 and 3 are in column 2, and 1 in column 3.

6	9	8	23
4	3	5	12
7	2	1	10
168	54	40	

$A = 6, B = 3, C = 1$

Therefore, is ABC is 631

2022 Eye Level MATH Olympiad [Grade9]

No.	Answer	No.	Answer	No.	Answer	No.	Answer	No.	Answer
1	1	11	48	21	39	31	32	41	812
2	32	12	232	22	-6	32	275	42	700
3	5	13	69	23	4	33	625	43	108
4	2	14	527	24	5	34	24	44	15
5	3	15	44	25	12	35	52	45	1
6	8	16	524	26	83	36	50	46	3
7	1	17	62	27	-6	37	36	47	30
8	9	18	16	28	-21	38	40	48	6
9	38	19	3	29	18	39	996	49	9
10	8	20	4	30	276	40	8	50	9

【Sol】

41.

$$91 + 94 + 97 + 100 + 103 + 106 + 109 + 112 = 203 \times 4 = 812$$

42. The perimeter of the figure is calculated as follows:

$$3 + 1 + 2 + 1 + 3 + 4 + 3 + 1 + 2 + 1 + 3 + 4 = 28(\text{cm})$$

So the actual perimeter is

$$28 \times 25 = 700.$$

43.

$\frac{13}{21}$	$\frac{15}{34}$	$\frac{17}{55}$	$\frac{19}{89}$
(7)	(8)	(9)	(10)

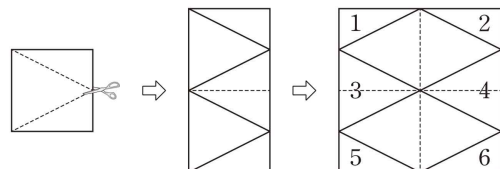
$$89 + 19 = 108$$

47.

\$1	\$5	\$10	\$1	\$5	\$10	\$1	\$5	\$10	\$1	\$5	\$10	\$1	\$5	\$10
0	1	4	0	5	2	0	7	1	30	1	1	20	5	0
5	0	4	5	4	2	5	6	1	35	0	1	25	4	0
0	3	3	10	3	2	10	5	1	0	9	0	30	3	0
5	2	3	15	2	2	15	4	1	5	8	0	35	2	0
10	1	3	20	1	2	20	3	1	10	7	0	40	1	0
15	0	3	25	0	2	25	2	1	15	6	0	45	0	0

$\therefore 30$ ways

48.



49. $CC \times B = CC$

So, $B = 1$

$$AB - CC = B \square$$

$$A = C + 2 \text{ from } C > B = 1$$

$$CC \times A = \square \square A$$

$$A = 8, C = 6 \text{ or } A = 5, C = 3$$

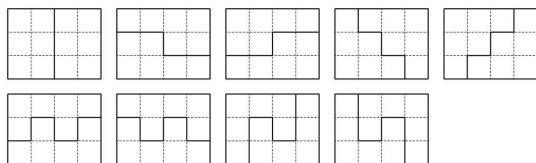
Of these, the value satisfying the above division process is

$$A = 5, C = 3$$

$$\begin{array}{r}
 155 \\
 33 \overline{) 5115} \\
 \underline{33} \\
 181 \\
 \underline{165} \\
 165 \\
 \underline{165} \\
 0
 \end{array}$$

$$\begin{aligned}
 A &= 5, \quad B = 1, \quad C = 3 \\
 A + B + C &= 9
 \end{aligned}$$

50.



$\therefore 9$ ways