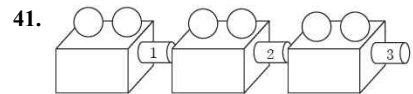


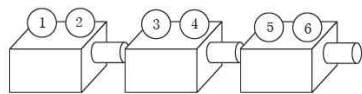
2023 Eye Level MATH Olympiad [Grade2]

No.	Answer	No.	Answer	No.	Answer	No.	Answer	No.	Answer
1	(B)	11	(A)	21	(D)	31	15	41	9
2	(A)	12	(B)	22	(E)	32	20	42	19
3	(C)	13	(C)	23	(C)	33	5	43	12
4	(E)	14	(C)	24	(A)	34	6	44	7
5	(D)	15	(A)	25	(E)	35	18	45	3
6	(E)	16	(B)	26	(C)	36	30	46	(D)
7	(D)	17	(D)	27	(D)	37	11	47	(B)
8	(E)	18	(B)	28	(D)	38	31	48	(C)
9	(C)	19	(A)	29	(B)	39	104	49	(A)
10	(C)	20	(B)	30	(D)	40	79	50	(C)

[Sol]

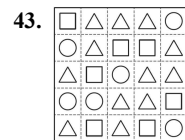
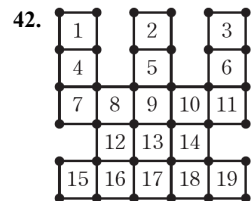


cylinder-shaped figures 3

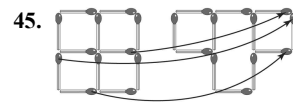


ball-shaped figures 6

$$3 + 6 = 9$$



44. $A = 4, B = 3$
 $A + B = 4 + 3 = 7$

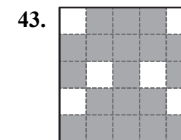
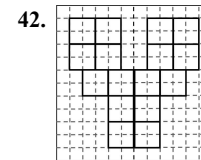
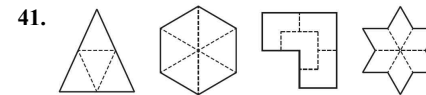


49. The figure appears repeatedly in circles and squares.
 Follow the rules in 1 white, 2 black, 3 white, 4 black, ...

2023 Eye Level MATH Olympiad [Grade3]

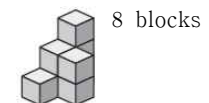
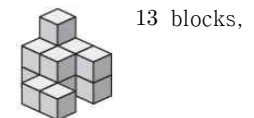
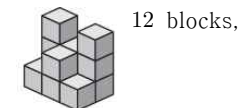
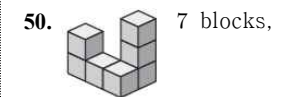
No.	Answer	No.	Answer	No.	Answer	No.	Answer	No.	Answer
1	(C)	11	(C)	21	(C)	31	12	41	4
2	(B)	12	(A)	22	(E)	32	65	42	16
3	(D)	13	(B)	23	(A)	33	47	43	19
4	(A)	14	(A)	24	(D)	34	103	44	33
5	(D)	15	(E)	25	(A)	35	231	45	15
6	(D)	16	(B)	26	(D)	36	757	46	(B)
7	(B)	17	(C)	27	(E)	37	27	47	(A)
8	(C)	18	(D)	28	(A)	38	32	48	(A)
9	(E)	19	(E)	29	(B)	39	124	49	(D)
10	(C)	20	(C)	30	(E)	40	768	50	(D)

[Sol]



44. The number added repeatedly is 6.
 $A = 15 + 6 + 6 + 6 = 33$

45. The relationship between A, B is $A + 7 = B$.
 So the missing number is $8 + 7 = 15$.



$$13 - 7 = 6$$

2023 Eye Level MATH Olympiad [Grade4]

No.	Answer	No.	Answer	No.	Answer	No.	Answer	No.	Answer
1	(A)	11	(C)	21	(C)	31	95	41	40
2	(E)	12	(B)	22	(A)	32	414	42	16
3	(C)	13	(D)	23	(E)	33	441	43	42
4	(D)	14	(A)	24	(D)	34	748	44	7
5	(C)	15	(C)	25	(B)	35	915	45	25
6	(B)	16	(E)	26	(B)	36	556	46	31
7	(E)	17	(C)	27	(E)	37	6	47	10
8	(B)	18	(E)	28	(B)	38	37	48	(C)
9	(A)	19	(B)	29	(D)	39	19	49	(C)
10	(B)	20	(D)	30	(B)	40	13	50	(A)

[Sol]

41. $1 \square 1, 2 \square 2, 3 \square 3, 4 \square 4$

Each $\square$ can contain a number from 0 to 9.

$10 \times 4 = 40$

42. 8 blocks were used on the first floor, 6 on the second floor, and 2 on the third floor.

$8 + 6 + 2 = 16$

43. one side $60 \div 3 + 1 = 21$

both side $21 \times 2 = 42$

44. $\square = 12, \triangle = 5$ or $\square = 5, \triangle = 12$

$12 - 5 = 7$

45. $c + c + c = 33, c = 11$

$a + a + c = 27, a = 8$

$b + b + c = 23, b = 6$

$\star = a + b + c = 25$

46. $\rightarrow 8$

$\rightarrow 9$

$\rightarrow 10$

$\rightarrow 11$

$\rightarrow 12$

$\rightarrow 13$

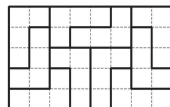
$\rightarrow 15$

$\rightarrow 16$

$\rightarrow 18$

$14 + 17 = 31$

47. Example



48. The number of squares of the example 12

(A) 14 (B) 15 (C) 12 (D) 13

49. (A) 1 triangle, 3 squares

(B) 5 triangles, 4 squares

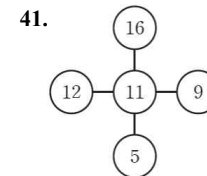
(C) 7 triangles, 7 squares

(D) 10 triangles, 9 squares

2023 Eye Level MATH Olympiad [Grade5]

No.	Answer	No.	Answer	No.	Answer	No.	Answer	No.	Answer
1	(D)	11	(C)	21	(C)	31	312	41	5
2	(C)	12	(B)	22	(A)	32	191	42	40
3	(E)	13	(C)	23	(D)	33	23	43	28
4	(E)	14	(D)	24	(B)	34	6	44	14
5	(A)	15	(A)	25	(E)	35	38	45	17
6	(B)	16	(D)	26	(A)	36	80	46	50
7	(A)	17	(E)	27	(D)	37	12	47	10
8	(B)	18	(B)	28	(C)	38	357	48	(B)
9	(C)	19	(A)	29	(D)	39	6	49	(D)
10	(D)	20	(E)	30	(B)	40	77	50	(C)

[Sol]



42. 18 apples = (2×6) pears = 12 pears

12 pears = (10×4) tangerines

= 40 tangerines

43. Even if the month has either 28

days or 31 days, the last

Wednesday is always 28th.

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	?	?	?

44. The relationship between A, B, and C is $2A - B = C$.

So the missing number is 14.

45. $a + a + b + b = 10, a + b = 5$

$a + a + b + a = 11, 2a + 5 = 11,$

$a = 3, b = 2$

$a + a + a + c = 14, c = 5$

$\star = c + c + c + b = 17$

46. perimeter of the star-shaped

ornament $15 \times 10 = 150$

$150 \div 3 = 50$



49. (A) 181 (B) 1881 (C) $18 + 81 = 99$

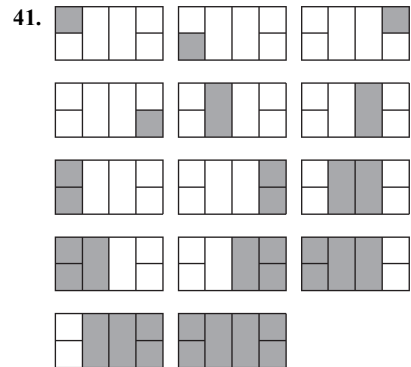
(D) $18 + 181 + 81 = 280$

5 points	3 points	1 point	Total points
3	0	0	15
2	1	0	13
2	0	1	11
1	2	0	11
1	1	1	9
1	0	2	7
0	3	0	9
0	2	1	7
0	1	2	5
0	0	3	3

2023 Eye Level MATH Olympiad [Grade6]

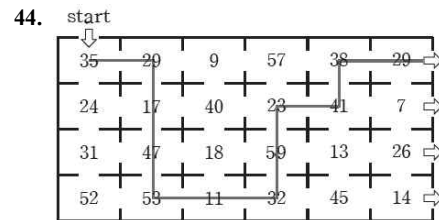
No.	Answer	No.	Answer	No.	Answer	No.	Answer	No.	Answer
1	D	11	C	21	C	31	26	41	14
2	E	12	A	22	B	32	33	42	17
3	E	13	D	23	C	33	37	43	15
4	B	14	B	24	D	34	600	44	29
5	C	15	D	25	A	35	128	45	18
6	B	16	C	26	C	36	4	46	6
7	A	17	B	27	B	37	490	47	92
8	C	18	E	28	A	38	305	48	B
9	D	19	B	29	A	39	48	49	C
10	B	20	E	30	E	40	24	50	A

[Sol]

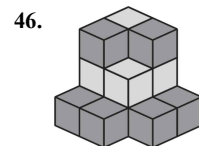
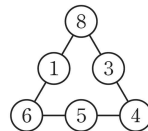


42. $(\star - 7) + (\star + 7) + (\star - 1) + (\star + 1) = 68$
 $\star = 17$

43. 1-digit number : 1, 2, 3
 2-digit number :
 12, 13, 21, 23, 31, 32
 3-digit number :
 123, 132, 213, 231, 312, 321
 $\therefore 3 + 6 + 6 = 15$

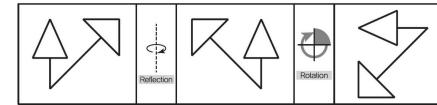


45. $15 = 8 + 6 + 1 = 8 + 4 + 3 = 6 + 5 + 4$
 8, 6, and 4 are used twice each,
 so they must be located in the A,
 B, and C positions.
 $\therefore 8 + 6 + 4 = 18$



47. 1 $1 + 2 \times 2 = 5$
 2 $1 + 2 + 3 \times 3 = 12$
 3 $1 + 2 + 3 + 4 \times 4 = 22$
 4 $1 + 2 + 3 + 4 + 5 \times 5 = 35$
 $\vdots$
 7 $1 + 2 + 3 + 4 + 5 + 6 + 7 + 8 \times 8 = 92$

49.



50. The order in which four people
 came in is as follows.
 Olivia-Elena-Tony-Jeremy

2023 Eye Level MATH Olympiad [Grade7]

No.	Answer	No.	Answer	No.	Answer	No.	Answer	No.	Answer
1	(E)	11	(D)	21	(B)	31	54	41	24
2	(C)	12	(C)	22	(D)	32	399	42	5
3	(D)	13	(B)	23	(E)	33	434	43	7
4	(B)	14	(C)	24	(A)	34	469	44	210
5	(A)	15	(C)	25	(B)	35	33	45	11
6	(E)	16	(D)	26	(D)	36	252	46	44
7	(D)	17	(B)	27	(C)	37	48	47	31
8	(C)	18	(E)	28	(A)	38	125	48	(D)
9	(B)	19	(C)	29	(E)	39	30	49	(C)
10	(A)	20	(A)	30	(C)	40	125	50	(A)

[Sol]

41. 15 cut : 60 minutes

1 cut : 4 minutes

6 cut : 24 minutes

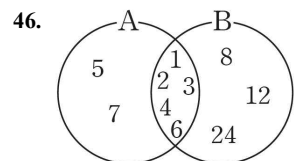
42. The (E) is heavier than the other marbles.

43. A-a, A-b, B-a, B-b,
C-a, C-b, D

44. $4.9 - (8.2 - 5.4) = 2.1\text{ m}$
 $2.1\text{ m} = 210\text{ cm}$

45.

Number of skips	1	2	3	4	5	6	7	8	9	10	11	12
Numerical location	4	7	10	13	3	6	9	12	2	5	8	11



$\therefore 8 + 12 + 24 = 44$

47. 10, 20, ..., 90 : 9 times

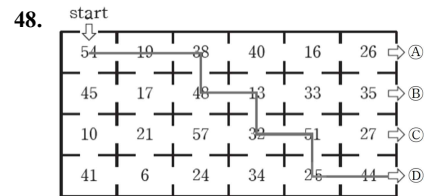
100 : 2 times

101, 102, ..., 109 : 9 times

110, 120, ..., 190 : 9 times

200 : 2 times

$\therefore 9 + 2 + 9 + 9 + 2 = 31$ times



49. $34 \div 2$, $36 \div 2$, $46 \div 2$, $64 \div 2$, $24 \div 3$,

$42 \div 3$, $32 \div 4$, $36 \div 4$, $24 \div 6$, $42 \div 6$

50. $1 = 7 - (2 + 4) \rightarrow$

$2 \rightarrow$

$3 = 7 - 4 \rightarrow$

$4 \rightarrow$

$5 = 7 - 2 \rightarrow$

$6 = 2 + 4 \rightarrow$

$7 \rightarrow$

$9 = 2 + 7 \rightarrow$

$11 = 4 + 7 \rightarrow$

$13 = 2 + 4 + 7$

$\rightarrow$

These three sticks can not measure 8cm, 10cm, 12cm.

$\therefore 8 + 10 + 12 = 30\text{ cm}$

2023 Eye Level MATH Olympiad [Grade8]

No.	Answer	No.	Answer	No.	Answer	No.	Answer	No.	Answer
1	Ⓒ	11	Ⓐ	21	Ⓒ	31	30	41	4
2	Ⓔ	12	Ⓒ	22	Ⓐ	32	64	42	9
3	Ⓔ	13	Ⓔ	23	Ⓒ	33	104	43	22
4	Ⓓ	14	Ⓒ	24	Ⓔ	34	29	44	155
5	Ⓒ	15	Ⓑ	25	Ⓓ	35	6	45	93
6	Ⓑ	16	Ⓔ	26	Ⓒ	36	24	46	10
7	Ⓐ	17	Ⓐ	27	Ⓐ	37	45	47	8
8	Ⓓ	18	Ⓓ	28	Ⓓ	38	960	48	Ⓒ
9	Ⓑ	19	Ⓑ	29	Ⓔ	39	44	49	Ⓐ
10	Ⓔ	20	Ⓒ	30	Ⓓ	40	652	50	Ⓓ

[Sol]

41. (total number of blocks)
 -(number of painted blocks)
 = $38 - 34 = 4$

42.

Number of \$10 bills	Number of \$5 bills	Number of \$1 bills
3	1	1
3	0	6
2	3	1
2	2	6
2	1	11
1	5	1
1	4	6
1	3	11
0	5	11

43. maximum : $6 \times 3 - 2 + 3 = 19$
 minimum : $6 + 3 - 2 \times 3 = 3$ or
 $6 - 3 \times 2 + 3 = 3$
 $\therefore 19 + 3 = 22$

44. $A = B + C$, $B = 2C + D$, $C = D + 10$
 $210 = A = B + C = 3C + D = 4D + 30$
 $D = 45$, $C = 55$, $B = 155$

45. 1 2, 2 9(= 2 + 7)
 3 18(= 9 + 9), 4 29(= 18 + 11),
 5 29 + 13 = 42, 6 42 + 15 = 57,
 7 57 + 17 = 74, 8 74 + 19 = 93

46. $AB \times A = AB$, so $A = 1$
 $AB \times B = B\Box$, so $B = 2$ or $B = 3$
 If $B = 3$, $13 \times 31 = 403$,
 so it is contradictory.
 $\therefore B = 2$, $C = 5$
 $A \times B \times C = 1 \times 2 \times 5 = 10$

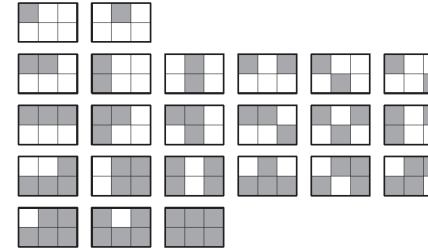
47.

	5L beaker	7L beaker
step 1	5L	0L
step 2	0L	5L
step 3	5L	5L
step 4	3L	7L
step 5	3L	0L
step 6	0L	3L
step 7	5L	3L
step 8	1L	7L

49. It can be seen that either Ⓐ or
 Ⓒ is a different cube.
 If Ⓒ is a different cube,

since Ⓐ and Ⓑ are same cube
 $\triangle$ and $\heartsuit$ must face each other.
 This contradicts Ⓓ,
 so the different cube is Ⓐ.

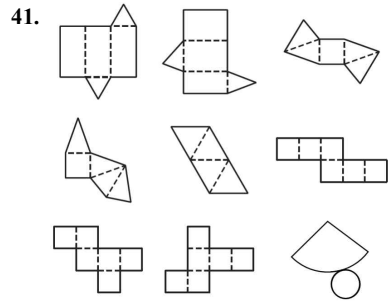
50.



2023 Eye Level MATH Olympiad [Grade9]

No.	Answer	No.	Answer	No.	Answer	No.	Answer	No.	Answer
1	(E)	11	(C)	21	(D)	31	595	41	9
2	(B)	12	(D)	22	(A)	32	175	42	45
3	(C)	13	(B)	23	(A)	33	160	43	181
4	(B)	14	(A)	24	(B)	34	252	44	475
5	(C)	15	(E)	25	(D)	35	216	45	62
6	(A)	16	(A)	26	(E)	36	968	46	39
7	(A)	17	(C)	27	(B)	37	98	47	22
8	(E)	18	(A)	28	(E)	38	942	48	(C)
9	(B)	19	(D)	29	(B)	39	75	49	(D)
10	(D)	20	(C)	30	(C)	40	910	50	(B)

[Sol]



42. Actual base $24 \times 0.5 = 12\text{m}$
 Actual height $15 \times 0.5 = 7.5\text{m}$
 Actual area $12 \times 7.5 \div 2 = 45\text{m}^2$

43.

7th	8th	9th	10th	11th
$\frac{19}{56}$	$\frac{22}{75}$	$\frac{25}{97}$	$\frac{28}{122}$	$\frac{31}{150}$

$$150 + 31 = 181$$

44. The height of its second bounce

$$40 \times \frac{3}{2} = 60\text{cm}$$

The height of its first bounce

$$60 \times \frac{3}{2} = 90\text{cm}$$

Original height of the ball

$$90 \times \frac{3}{2} = 135\text{cm}$$

$$\therefore 135 + 90 \times 2 + 60 \times 2 + 40 = 475\text{cm}$$

45. Charles won five more times than Jennifer because the score difference between Charles and Jennifer was 15.

Number of Charles's win	5	6	7	8	...	14	15
draw	31	28	25	22	...	4	1
Number of Jennifer's win	0	1	2	3	...	9	10
number of times they played	36	35	34	33	...	27	26

$$\therefore 36 + 26 = 62$$

46.

4		10
19	a	
b		

$$4 + 19 + b = 10 + a + b, a = 13$$

4		10
19	13	c
		d

$$19 + 13 + c = 10 + c + d, d = 22$$

$$\therefore A = 4 + 13 + 22 = 39$$

4	25	10
19	13	7
16	1	22

47. $7 = 6 + 1 = 5 + 2 = 4 + 3 = 3 + 4 = 2 + 5$
 $= 1 + 6 = 5 + 1 + 1 = 4 + 2 + 1 = 3 + 3 + 1$
 $= 2 + 4 + 1 = 1 + 5 + 1 = 4 + 1 + 2$
 $= 3 + 2 + 2 = 2 + 3 + 2 = 1 + 4 + 2$
 $= 3 + 1 + 3 = 2 + 2 + 3 = 1 + 3 + 3$
 $= 2 + 1 + 4 = 1 + 2 + 4 = 1 + 1 + 5$

48. The longest side must be shorter than the sum of the other two sides.

