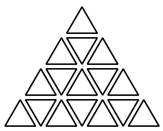
2024 Eye Level MATH Olympiad [Grade2]

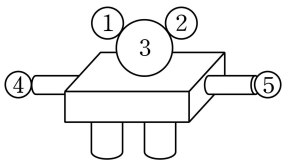
No.	Answer	No.	Answer	No.	Answer	No.	Answer	No.	Answer
1	Ⓒ	11	Ⓓ	21	Ⓓ	31	16	41	16
2	Ⓓ	12	Ⓑ	22	Ⓒ	32	24	42	6
3	Ⓒ	13	Ⓑ	23	Ⓓ	33	3	43	4
4	Ⓑ	14	Ⓒ	24	Ⓒ	34	9	44	15
5	Ⓔ	15	Ⓐ	25	Ⓐ	35	15	45	808
6	Ⓑ	16	Ⓐ	26	Ⓔ	36	14	46	Ⓑ
7	Ⓐ	17	Ⓔ	27	Ⓑ	37	21	47	Ⓒ
8	Ⓓ	18	Ⓔ	28	Ⓐ	38	17	48	Ⓓ
9	Ⓓ	19	Ⓒ	29	Ⓔ	39	114	49	Ⓒ
10	Ⓔ	20	Ⓒ	30	Ⓒ	40	40	50	Ⓒ

【Sol】

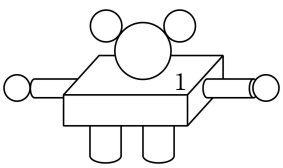
41.



42.

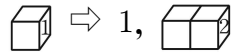


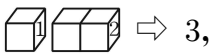
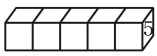
ball-shaped figures 5

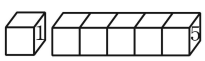


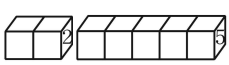
box-shaped figures 1

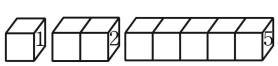
$\therefore 5+1=6$

43.  ⇨ 1, ⇨ 2,

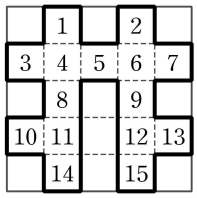
 ⇨ 3,  ⇨ 5,

 ⇨ 6,

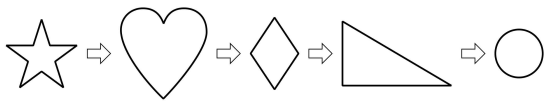
 ⇨ 7,

 ⇨ 8

44.



46.



49. Ⓐ Compared to (4), there are two numbers that are not the same.
Ⓑ Compared to (1) and (3) there are two numbers that are not the same.
Ⓓ Compared to (3), there are two numbers that are not the same.

50. The figure appears repeatedly in circles, triangles and squares.
Follow the rules in 1 black, 2 white, 3 black, 4 white, 5 black, 6 white, …

2024 Eye Level MATH Olympiad [Grade3]

No.	Answer	No.	Answer	No.	Answer	No.	Answer	No.	Answer
1	Ⓒ	11	Ⓓ	21	Ⓒ	31	23	41	24
2	Ⓔ	12	Ⓑ	22	Ⓔ	32	8	42	16
3	Ⓐ	13	Ⓒ	23	Ⓑ	33	63	43	38
4	Ⓓ	14	Ⓐ	24	Ⓓ	34	213	44	14
5	Ⓐ	15	Ⓔ	25	Ⓐ	35	421 or 694	45	15
6	Ⓑ	16	Ⓒ	26	Ⓒ	36	51	46	Ⓓ
7	Ⓐ	17	Ⓑ	27	Ⓐ	37	749	47	Ⓑ
8	Ⓓ	18	Ⓒ	28	Ⓓ	38	128	48	Ⓒ
9	Ⓔ	19	Ⓐ	29	Ⓔ	39	252	49	Ⓒ
10	Ⓒ	20	Ⓔ	30	Ⓑ	40	900	50	Ⓐ

【Sol】

41. A = 4, B = 6

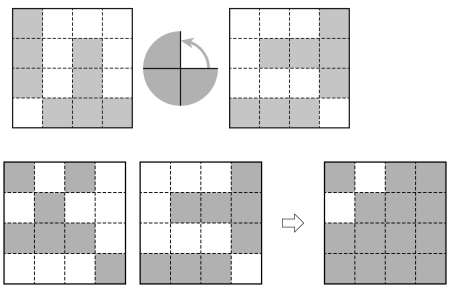
∴ A × B = 4 × 6 = 24

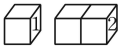
42. 9 blocks were used on the first floor, 6 blocks on the second floor, and 1 block on the third floor.

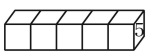
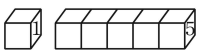
∴ 9 + 6 + 1 = 16

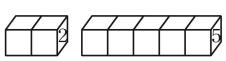
43. 81 − 25 − 18 = 38

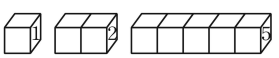
44.

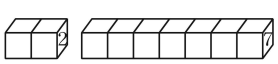


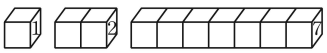
45.  ⇨ 1,  ⇨ 2,  ⇨ 3,

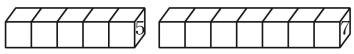
 ⇨ 5,  ⇨ 6,

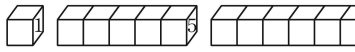
 ⇨ 7,

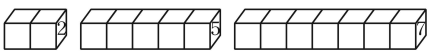
 ⇨ 8,

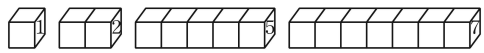
 ⇨ 9,

 ⇨ 10,

 ⇨ 12,

 ⇨ 13,

 ⇨ 14,

 ⇨ 15

∴ 4 + 11 = 15

46. A = 25, B = 49

∴ A + B = 25 + 49 = 74

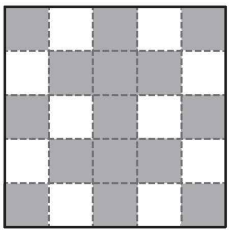
49. Angela : cat, Brody : dog,
Carina : goldfish, Dylan : parrot

50. The figure appears repeatedly in squares, circles and triangles.
The size of the figure appears repeatedly, large and small.
Follow the rules in 1 black, 1 white, 1 black, 2 white, 1 black, 3 white, 1 black, 4 white, 1 black, …

2024 Eye Level MATH Olympiad [Grade4]

No.	Answer	No.	Answer	No.	Answer	No.	Answer	No.	Answer
1	Ⓒ	11	Ⓒ	21	Ⓓ	31	35	41	10
2	Ⓔ	12	Ⓓ	22	Ⓔ	32	32	42	16
3	Ⓑ	13	Ⓒ	23	Ⓐ	33	132	43	300
4	Ⓒ	14	Ⓔ	24	Ⓑ	34	637	44	160
5	Ⓑ	15	Ⓐ	25	Ⓓ	35	6	45	12
6	Ⓐ	16	Ⓓ	26	Ⓐ	36	16	46	25
7	Ⓓ	17	Ⓐ	27	Ⓔ	37	9	47	74
8	Ⓒ	18	Ⓓ	28	Ⓒ	38	14	48	Ⓒ
9	Ⓓ	19	Ⓒ	29	Ⓓ	39	38	49	Ⓐ
10	Ⓔ	20	Ⓑ	30	Ⓐ	40	8	50	Ⓒ

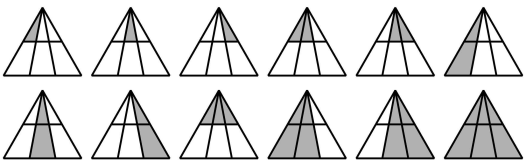
【Sol】

41. 

42. The relationship between A, B, and C is $A \times B + 1 = C$.
So the missing number is 16.

43. 2 apples = 360 g = 3 tangerines
1 tangerine = 120 g
5 tangerines = 600 g = 2 pears
1 pear = 300 g

44. $(180 + 180 + 60 + 60) \div 3 = 160$

45. 

46. $7 = 3 + 3 + 1$
$8 = 6 + 1 + 1$
$9 = 3 + 3 + 3$
$10 = 6 + 3 + 1$
$12 = 6 + 3 + 3$
$13 = 6 + 6 + 1$
$15 = 6 + 6 + 3$
$\therefore\ 11 + 14 = 25$

47. $81 - 18 = 63$
$81 - 25 - 18 = 38$
$81 - 2 + 5 - 18 = 66$
$81 - 2 + 8 + 5 - 18 = 74$

48. Rotating the figure Ⓐ  Ⓑ 

Reflecting the figure Ⓓ 

50. The given figure used 15 blocks.
Ⓐ, Ⓑ, Ⓓ 15 blocks
Ⓒ 16 blocks

2024 Eye Level MATH Olympiad [Grade5]

No.	Answer	No.	Answer	No.	Answer	No.	Answer	No.	Answer
1	Ⓒ	11	Ⓑ	21	Ⓒ	31	442	41	25
2	Ⓑ	12	Ⓔ	22	Ⓔ	32	14	42	12
3	Ⓔ	13	Ⓒ	23	Ⓑ	33	16	43	35
4	Ⓓ	14	Ⓔ	24	Ⓒ	34	13	44	6
5	Ⓑ	15	Ⓓ	25	Ⓔ	35	20	45	15
6	Ⓐ	16	Ⓐ	26	Ⓐ	36	7	46	2
7	Ⓔ	17	Ⓒ	27	Ⓒ	37	245	47	10
8	Ⓓ	18	Ⓔ	28	Ⓑ	38	169	48	Ⓑ
9	Ⓑ	19	Ⓐ	29	Ⓓ	39	66	49	Ⓒ
10	Ⓓ	20	Ⓑ	30	Ⓐ	40	34	50	Ⓒ

【Sol】

41. 2-digit numbers : 11, 33, 55, 77, 99

3-digit numbers : 1□1, 3□3

Each □ can contain a number from 0 to 9.

$5+10\times2=25$

42. All possible 2-digit numbers that can be made with these number cards are as follows.

12, 13, 14, 21, 23, 24, 31, 32, 34, 41, 42, 43

43. $c+c+c=18,\ c=6$

$b+b+c=22,\ b=8$

$a+b+b=21,\ a=5$

▲$=a+b+c=19$, ●$=a+a+c=16$

∴ ▲+●$=35$

44. 1 black stone : 1, white stone : 0

2 black stone : 1, white stones : 3

3 black stones : $1+5=6$,
white stones : 3

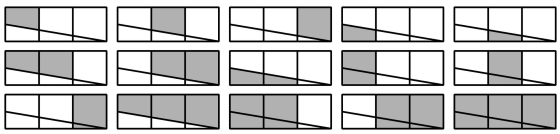
4 black stones : 6,
white stones : $3+7=10$

5 black stones : $6+9=15$,
white stones : 10

6 black stones : 15,
white stones : $10+11=21$

$21-15=6$

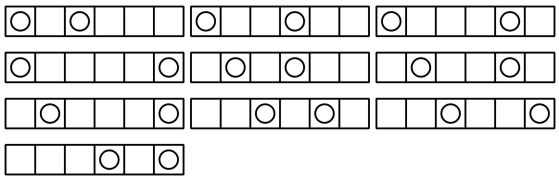
45.



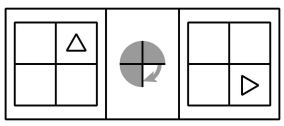
46. □$=8$, △$=6$ or □$=6$, △$=8$

$8-6=2$

47.



48.



49. May has 31 days.

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	

50. D>C>A>B

2024 Eye Level MATH Olympiad [Grade6]

No.	Answer	No.	Answer	No.	Answer	No.	Answer	No.	Answer
1	Ⓐ	11	Ⓒ	21	Ⓒ	31	12	41	7
2	Ⓓ	12	Ⓐ	22	Ⓔ	32	19	42	18
3	Ⓔ	13	Ⓓ	23	Ⓐ	33	33	43	9
4	Ⓑ	14	Ⓐ	24	Ⓓ	34	28	44	8
5	Ⓔ	15	Ⓔ	25	Ⓒ	35	780	45	15
6	Ⓒ	16	Ⓑ	26	Ⓑ	36	15	46	15
7	Ⓐ	17	Ⓑ	27	Ⓓ	37	476	47	12
8	Ⓒ	18	Ⓒ	28	Ⓔ	38	18	48	Ⓐ
9	Ⓓ	19	Ⓓ	29	Ⓒ	39	650	49	Ⓒ
10	Ⓑ	20	Ⓓ	30	Ⓑ	40	6	50	Ⓒ

【Sol】

41. $18+14-25=7(\mathrm{m})$

42. Number of cases where three digits are created with only 1, 2, and 3 : 6

Number of cases with □0□ : 6

Number of cases with □□0 : 6

$6+6+6=18$

43.

5 points	3 points	2 points	Total points
3	0	0	15
2	1	0	13
2	0	1	12
1	2	0	11
1	1	1	10
1	0	2	9
0	3	0	9
0	2	1	8
0	1	2	7
0	0	3	6

44. The following is one of several methods.

123456 ⇨ 213456 ⇨ 231456 ⇨ 234156 ⇨ 234516 ⇨ 234561 ⇨ 243561 ⇨ 243651 ⇨ 246351

45.

	8	8
+	6	8
1	5	6

$A=8,\ B=6,\ C=1$

$A+B+C=15$

46. $144\div 12=12$

$A\times C=12,\ B\times D=12$

A, B, C, D and 12 are different numbers.

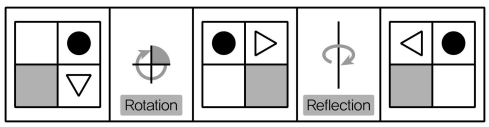
$12=2\times 6$ or $12=3\times 4$

$\therefore\ 2+3+4+6=15$

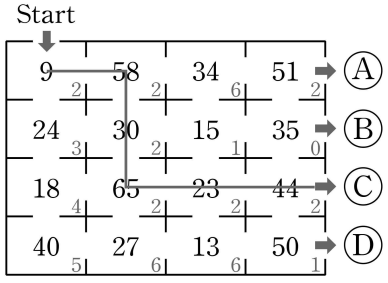
47.

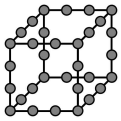
	Frankie	Gemma	Hudson
last	8	8	8
second	8	10	6
first	2	10	12

48.



49.



50. 

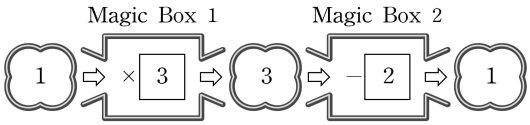
$\therefore$ 32

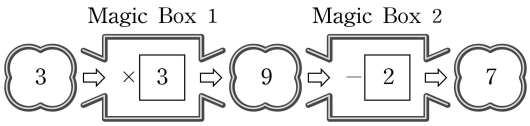
2024 Eye Level MATH Olympiad [Grade7]

No.	Answer	No.	Answer	No.	Answer	No.	Answer	No.	Answer
1	Ⓑ	11	Ⓓ	21	Ⓒ	31	323	41	15
2	Ⓔ	12	Ⓑ	22	Ⓒ	32	104	42	5
3	Ⓓ	13	Ⓐ	23	Ⓑ	33	47	43	57
4	Ⓒ	14	Ⓔ	24	Ⓑ	34	29	44	45
5	Ⓑ	15	Ⓓ	25	Ⓐ	35	42	45	11
6	Ⓒ	16	Ⓑ	26	Ⓒ	36	665	46	7
7	Ⓓ	17	Ⓒ	27	Ⓔ	37	28	47	8
8	Ⓒ	18	Ⓑ	28	Ⓐ	38	612	48	Ⓐ
9	Ⓑ	19	Ⓓ	29	Ⓔ	39	268	49	Ⓑ
10	Ⓐ	20	Ⓐ	30	Ⓐ	40	119	50	Ⓓ

【Sol】

41.

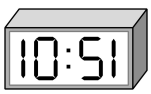




$43+2=45$, $45\div 3=15$

42.

times	3L	5L	8L
1	0	5	0
	large container ⇨ 5L beaker		
2	0	0	5
	5L beaker ⇨ 8L beaker		
3	0	5	5
	large container ⇨ 5L beaker		
4	3	2	5
	5L beaker ⇨ 3L beaker		
5	3	0	7
	5L beaker ⇨ 8L beaker		

43. When Mario looks at the clock, the time that the clock originally points to 

The time when he arrives at the restaurant is 11 : 03.

There are 57 minutes left until 12 o'clock.

44. top view 9

side view 8, $8\times 2=16$

front view 10, $10\times 2=20$

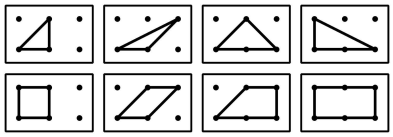
$9+16+20=45$

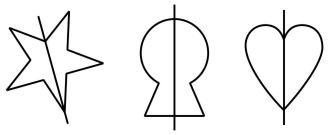
45.

quarter	dimes	nickels	Total (cent)
1	2	2	55
1	2	1	50
1	2	0	45
1	1	2	45
1	1	1	40
1	1	0	35
1	0	2	35
1	0	1	30
1	0	0	25
0	2	2	30
0	2	1	25
0	2	0	20
0	1	2	20
0	1	1	15
0	1	0	10
0	0	2	10
0	0	1	5

46.

ducks	pigs	number of legs
⋮	⋮	⋮
10	10	60
11	9	58
12	8	56
13	7	54
⋮	⋮	⋮

47. 

48. 

49. The two angles are 45° and 60°, so the other angle is 75°.

The angles of an isosceles triangle with the same length for two sides cannot all be different.

2024 Eye Level MATH Olympiad [Grade8]

No.	Answer	No.	Answer	No.	Answer	No.	Answer	No.	Answer
1	Ⓑ	11	Ⓑ	21	Ⓒ	31	406	41	25
2	Ⓐ	12	Ⓓ	22	Ⓐ	32	24	42	92
3	Ⓒ	13	Ⓔ	23	Ⓓ	33	725	43	31
4	Ⓓ	14	Ⓑ	24	Ⓐ	34	167	44	140
5	Ⓒ	15	Ⓒ	25	Ⓒ	35	11	45	51
6	Ⓒ	16	Ⓑ	26	Ⓑ	36	12	46	29
7	Ⓑ	17	Ⓓ	27	Ⓐ	37	175	47	31
8	Ⓔ	18	Ⓑ	28	Ⓑ	38	15	48	Ⓒ
9	Ⓐ	19	Ⓔ	29	Ⓒ	39	148	49	Ⓑ
10	Ⓓ	20	Ⓒ	30	Ⓔ	40	78	50	Ⓒ

【Sol】

41.

$$\begin{array}{r} \boxed{6}\,\triangle\!\!8 \\ \hline \triangle\!\!8\,)\,5\;5\;0 \\ \star\!\!4\;\triangle\!\!8 \\ \hline \diamond\!\!7\;\;0 \\ \boxed{6}\;\star\!\!4 \\ \hline \boxed{6} \end{array}$$

$\therefore 6+8+4+7=25$

42. 1 5

2 $5+(3+2+2)=12$

3 $5+7+(4+3+3)=22$

4 $5+7+10+(5+4+4)=35$

⋮

7 $5+7+10+13+16+19+22=92$

43. league games : $6\times4=24$

tournament games : $4+2+1=7$

$\therefore 24+7=31$

44. 1, 10, 12, 13, ⋯, 19 : 10 times

11 : 2 times

21, 31, ⋯, 91 : 8 times

101 : 2 times

100, 102, ⋯, 109 : 9 times

111 : 3 times

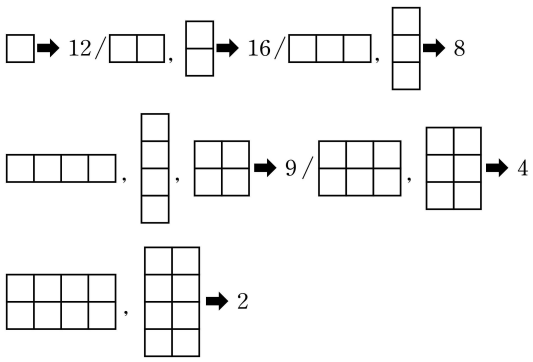
110, 112, 113, ⋯, 119 : 18 times

121, 131, 141, ⋯, 191 : 16 times

120, 122, 123, ⋯, 199 : 72 times

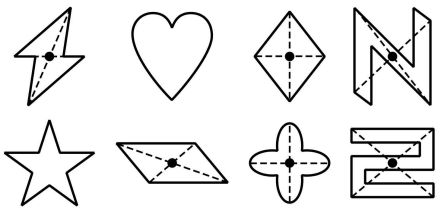
$\therefore 10+2+8+2+9+3+18+16+72=140$

45.



46. $4 \div 2 + 9 \times 3 = 29$

48.

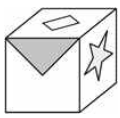


49.

Number of skips	Numeral location
1	4
2	7
3	10
4	13
5	16
6	3
7	6
8	9
9	12
10	15
11	2
12	5
13	8
14	11
15	14

50.  and  face each other.

© should be the following figure.



2024 Eye Level MATH Olympiad [Grade9]

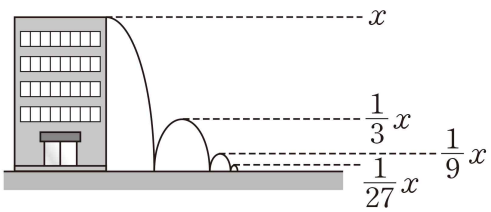
No.	Answer	No.	Answer	No.	Answer	No.	Answer	No.	Answer
1	Ⓓ	11	Ⓐ	21	Ⓔ	31	217	41	12
2	Ⓒ	12	Ⓒ	22	Ⓓ	32	594	42	54
3	Ⓔ	13	Ⓑ	23	Ⓒ	33	720	43	8
4	Ⓑ	14	Ⓐ	24	Ⓑ	34	40	44	50
5	Ⓐ	15	Ⓔ	25	Ⓐ	35	426	45	16
6	Ⓓ	16	Ⓓ	26	Ⓓ	36	21	46	15
7	Ⓑ	17	Ⓔ	27	Ⓐ	37	64	47	158
8	Ⓔ	18	Ⓒ	28	Ⓒ	38	314	48	Ⓓ
9	Ⓒ	19	Ⓑ	29	Ⓔ	39	115	49	Ⓐ
10	Ⓓ	20	Ⓐ	30	Ⓓ	40	137	50	Ⓑ

【Sol】

41. $\left(1-\frac{2}{5}\right)\times\left(1-\frac{3}{4}\right)=\frac{3}{20}$

$\therefore 1.8\div\frac{3}{20}=12(\text{km})$

42.



$x+\frac{2}{3}x+\frac{2}{9}x+\frac{2}{27}x=106$

$\frac{53}{27}x=106$

$\therefore x=54$

43. The number of steps Helena or Joy can take when she wins.

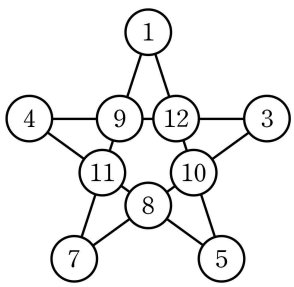
Helena		Joy	
scissors	2		1
paper	3		2
paper	3		2
paper	3		2
scissors	2		1
rock	1		3
paper	3		2
scissors	2		1
paper	3		2
paper	3		2

Only five of these can be added each that are not in the same row. The only time Helena went up 4 steps more than Joy was when Helena went up 12 steps and Joy went up 8 steps.

For example, there are cases like this.

Helena		Joy	
scissors	2	paper	
paper	3	rock	
paper	3	rock	
paper	3	rock	
scissors		rock	1
rock	1	scissors	
paper		scissors	2
scissors		rock	1
paper		scissors	2
paper		scissors	2

44.



$\therefore 8+9+10+11+12=50$

45. $36 \div 12$, $48 \div 12$, $84 \div 12$, $26 \div 13$,
$28 \div 14$, $32 \div 16$, $48 \div 16$, $36 \div 18$,
$63 \div 21$, $84 \div 21$, $46 \div 23$, $62 \div 31$,
$64 \div 32$, $68 \div 34$, $82 \div 41$, $86 \div 43$

46.

			3				
	6					9	
	4		8	A			B
					6		
	4						

or

			3				
	6					9	
	4		8	A			B
					6		
	4						

$A = 5, B = 3$

$\therefore A \times B = 15$

47. Evan's marbles : x

Felix's marbles : $x+4$

Grace's marbles : $x-1$

Chloe's remaining marbles : $x-1$

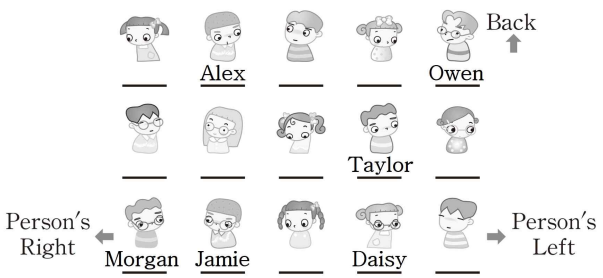
$x+(x-1)=77$

$x=39$

Chloe's marbles at the beginning :

$4x+2=158$

48.



49. There are 4 cases where the red figure comes first, as follows.

Ⓡ B Ⓨ R Ⓑ Y Ⓡ Y Ⓑ R Ⓨ B

R Ⓑ Y Ⓡ B Ⓨ R Ⓨ B Ⓡ Y Ⓑ

There are 4 cases where the blue figure comes in the front, and 4 cases where the yellow figure comes in the front, so the number of all cases is 12.

50.