

Answers – A Bridge Too Far

Puzzle 1 Ans = 100m

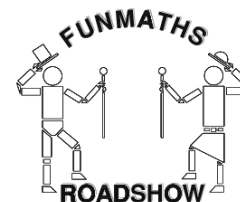
Puzzle 2 Ans = 80m

Puzzle 3 Ans = 100m

Puzzle 4 Ans = 120m

Puzzle 5 Ans = 70m

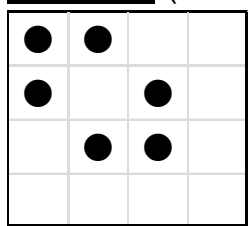
Puzzle 6 Ans = 60%



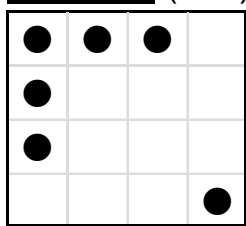
Answers – Bottles and Crates

There are several possible answers for 6 bottles [Note that the number 0 is even]

Puzzle 1 (even)

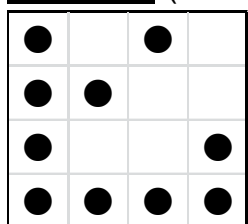


Puzzle 2 (odd)

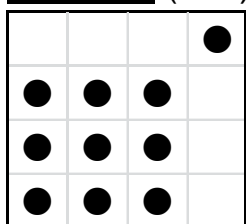


There are several possible answers for 10 bottles

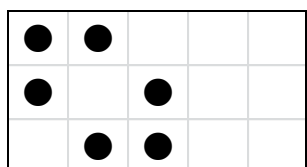
Puzzle 3 (even)



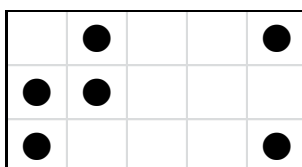
Puzzle 4 (odd)



Puzzle 5 (even) here are two possible answers for 6 bottles



or



Puzzle 6 - the task is impossible with an odd number in each row and column, since 6 cannot be the sum of three odd numbers.

Answers – Coin Collection

Puzzle 1 [1, 2, 5, 10, 20, 50]

The following amounts (also shown in red) cannot be made

4, 9, 14, 19, 24, 29, 34, 39, 40, 41, 42, 43, 44, 45, 46, 47, 48, 49, 54, 59, 64, 69, 74, 79, 84, 89, 90, 91, 92, 93, 94, 95, 96, 97, 98, 99

Puzzle 2 extra coins are 1p and 10p

Puzzle 3 [1, 5, 10, 25, 50]

The following amounts (also shown in red) cannot be made

2, 3, 4, 7, 8, 9, 12, 13, 14, 17, 18, 19, 20, 21, 22, 23, 24, 27, 28, 29, 32, 33, 34, 37, 38, 39, 42, 43, 44, 45, 46, 47, 48, 49, 52, 53, 54, 57, 58, 59, 62, 63, 64, 67, 68, 69, 70, 71, 72, 73, 74, 77, 78, 79, 82, 83, 84, 87, 88, 89, 92, 93, 94, 95, 96, 97, 98, 99

Puzzle 4 [1, 1, 1, 1, 5, 10, 25, 50]

The following amounts (also shown in red) cannot be made

20, 21, 22, 23, 24, 45, 46, 47, 48, 49, 70, 71, 72, 73, 74, 95, 96, 97, 98, 99

Puzzle 5 1 extra coin is needed, 5c

Puzzle 6 [1, 3, 6, 12, 24, 30]

The following amounts (also shown in red) cannot be made

2, 5, 8, 11, 14, 17, 20, 23, 26, 29, 32, 35, 38, 41, 44, 47, 50, 53, 56, 59, 62, 65, 68, 71, 74

Puzzle 7 1 extra coin is needed, 1d

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	32	33	34	35	36	37	38	39	40
41	42	43	44	45	46	47	48	49	50
51	52	53	54	55	56	57	58	59	60
61	62	63	64	65	66	67	68	69	70
71	72	73	74	75	76	77	78	79	80
81	82	83	84	85	86	87	88	89	90
91	92	93	94	95	96	97	98	99	

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	32	33	34	35	36	37	38	39	40
41	42	43	44	45	46	47	48	49	50
51	52	53	54	55	56	57	58	59	60
61	62	63	64	65	66	67	68	69	70
71	72	73	74	75	76	77	78	79	80
81	82	83	84	85	86	87	88	89	90
91	92	93	94	95	96	97	98	99	

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	32	33	34	35	36	37	38	39	40
41	42	43	44	45	46	47	48	49	50
51	52	53	54	55	56	57	58	59	60
61	62	63	64	65	66	67	68	69	70
71	72	73	74	75	76	77	78	79	80
81	82	83	84	85	86	87	88	89	90
91	92	93	94	95	96	97	98	99	

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	32	33	34	35	36	37	38	39	40
41	42	43	44	45	46	47	48	49	50
51	52	53	54	55	56	57	58	59	60
61	62	63	64	65	66	67	68	69	70
71	72	73	74	75	76				

Answers – Factorials

Puzzle 1 $6! = 720$, $7! = 5040$, $8! = 40320$, $9! = 362880$, $10! = 3628800$

Puzzle 2 Ans = 144

Puzzle 3 Ans = 4

Puzzle 4 Ans = 3150

Puzzle 5 Ans = 4200

Puzzle 6 Ans = 2520

Answers – Magic Circles

	Total	Middle			
Puzzle 1	12	4	1, 4, 7	2, 4, 6	3, 4, 5
	10	1	2, 1, 7	3, 1, 6	4, 1, 5
	14	7	1, 7, 6	2, 7, 5	3, 7, 4
Puzzle 2	28	7	8, 7, 13	9, 7, 12	10, 7, 11
	30	10	7, 10, 13	8, 10, 12	9, 10, 11
	32	13	7, 13, 12	8, 13, 11	9, 13, 10
Puzzle 3	6	-5	-2, -5, 13	1, -5, 10	4, -5, 7
	12	4	-5, 4, 13	-2, 4, 10	1, 4, 7
	18	13	-5, 13, 10	-2, 13, 7	1, 13, 4
Puzzle 4	-1	-4	-2, -4, 5	-1, -4, 4	0, -4, 3
Puzzle 5	1	1	-7, 1, 7	-6, 1, 6	-2, 1, 2
Puzzle 6	1	-5	-1, -5, 7	0, -5, 6	1, -5, 5
Puzzle 7	-3	5	-7, 5, -1	-6, 5, -2	-5, 5, -3
Puzzle 8	0	5	-6, 5, 1	-4, 5, -1	-3, 5, -2
Puzzle 9	164	80	14, 80, 70	20, 80, 64	40, 80, 44
Puzzle 10	148	48	18, 48, 82	41, 48, 59	43, 48, 57
Puzzle 11	-47	-23	-42, -23, 18	-32, -23, 8	-15, -23, -9
Puzzle 12	92	-3	-2, -3, 97	21, -3, 74	43, -3, 52
Puzzle 13	4	$\frac{3}{4}$	1, $\frac{3}{4}$, $2\frac{1}{4}$	$1\frac{1}{4}$, $\frac{3}{4}$, 2	$1\frac{1}{2}$, $\frac{3}{4}$, $1\frac{3}{4}$
	$4\frac{1}{2}$	$1\frac{1}{2}$	$\frac{3}{4}$, $1\frac{1}{2}$, $2\frac{1}{4}$	1, $1\frac{1}{2}$, 2	$1\frac{1}{4}$, $1\frac{1}{2}$, $1\frac{3}{4}$
	5	$2\frac{1}{4}$	$\frac{3}{4}$, $2\frac{1}{4}$, 2	1, $2\frac{1}{4}$, $1\frac{3}{4}$	$1\frac{1}{4}$, $2\frac{1}{4}$, $1\frac{1}{2}$

Answers – Never Say Die

Top and bottom numbers add up to 7

$$3 + 5 + 1 = 9$$

$$1 + 2 + 3 = 6$$

$$2 + 6 + 4 = 12$$

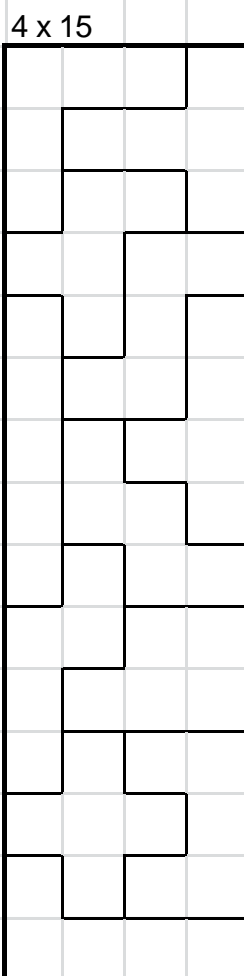
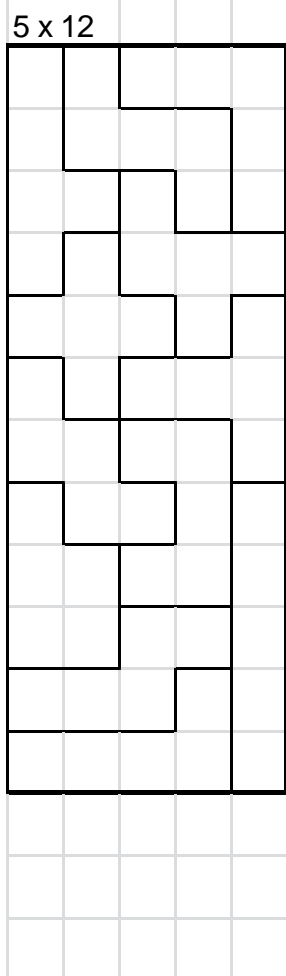
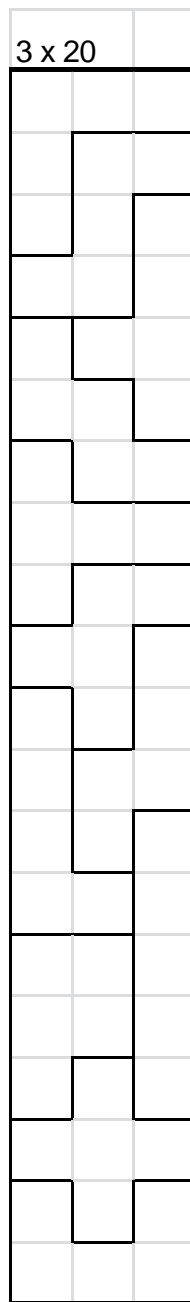
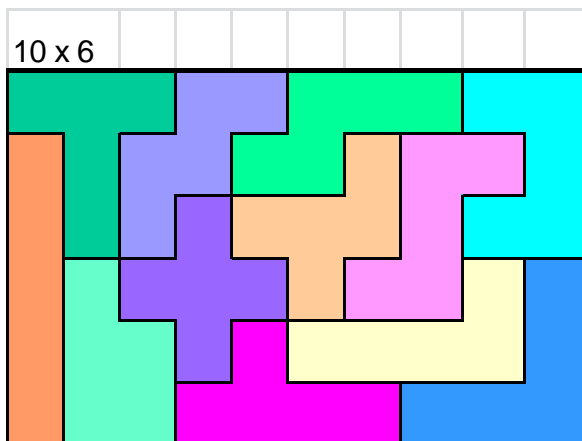
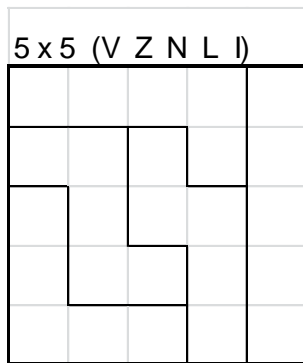
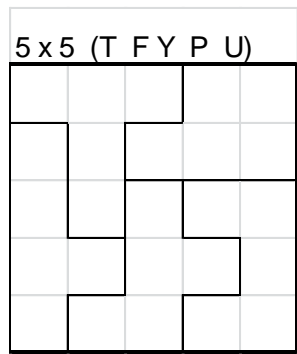
$$\text{Product} = 648$$

Answers - Number the Triangle

	Total	Clockwise from the top	Total	Clockwise from the top
<u>Puzzle 1</u>	9	1, 5, 3, 4, 2, 6	10	1, 4, 5, 2, 3, 6
	11	2, 3, 6, 1, 4, 5	12	4, 2, 6, 1, 5, 3
<u>Puzzle 2</u>	27	7, 11, 9, 10, 8, 12	28	7, 10, 11, 8, 9, 12
	29	8, 9, 12, 7, 10, 11	30	10, 8, 12, 7, 11, 9
<u>Puzzle 3</u>	27	3, 15, 9, 12, 6, 18	30	3, 12, 15, 6, 9, 18
	33	6, 9, 18, 3, 12, 15	36	12, 6, 18, 3, 15, 9
<u>Puzzle 4</u>	39	3, 23, 13, 18, 8, 28	44	3, 18, 23, 8, 13, 28
	49	8, 13, 28, 3, 18, 23	54	18, 8, 28, 3, 23, 13
<u>Puzzle 5</u>	-3	-1, -3, 1, -4, 0, -2	-4	-3, -2, 1, -4, -1, 0
	-5	-4, -1, 0, -3, -2, 1	-6	-4, 0, -2, -1, -3, 1
<u>Puzzle 6</u>	3	-5, 7, 1, 4, -2, 10	6	-5, 4, 7, -2, 1, 10
	9	-2, 1, 10, -5, 4, 7	12	4, -2, 10, -5, 7, 1
<u>Puzzle 7</u>	-3	-15, 13, -1, 6, -8, 20	4	-15, 6, 13, -8, -1, 20
	11	-8, -1, 20, -15, 6, 13	18	6, -8, 20, -15, 13, -1
<u>Puzzle 8</u>	96	10, 54, 32, 43, 21, 65	107	10, 43, 54, 21, 32, 65
	118	21, 32, 65, 10, 43, 54	129	43, 21, 65, 10, 54, 32
<u>Puzzle 9</u>	6.0	1.4, 2.6, 2.0, 2.3, 1.7, 2.9	6.3	1.4, 2.3, 2.6, 1.7, 2.0, 2.9
	6.6	1.7, 2.0, 2.9, 1.4, 2.3, 2.6	6.9	2.3, 1.7, 2.9, 1.4, 2.6, 2.0
<u>Puzzle 10</u>	$3\frac{3}{4}$	$\frac{3}{4}$, $1\frac{3}{4}$, $1\frac{1}{4}$, $1\frac{1}{2}$, 1, 2	4	$\frac{3}{4}$, $1\frac{1}{2}$, $1\frac{3}{4}$, 1, $1\frac{1}{4}$, 2
	$4\frac{1}{4}$	1, $1\frac{1}{4}$, 2, $\frac{3}{4}$, $1\frac{1}{2}$, $1\frac{3}{4}$	$4\frac{1}{2}$	$1\frac{1}{2}$, 1, 2, $\frac{3}{4}$, $1\frac{3}{4}$, $1\frac{1}{4}$

Answers - Pentominoes

There is often more than one solution to these problems



Answers – Spot to Spot

Puzzle 1

There are two possible solutions:

0	1	1
0		2
0		2
0	2	2

1	1	1
1		4
3		4
3	3	3

4	4	0
4		0
4		3
2	2	3

3	1	1
3		0
3		0
3	4	4

2	4	4
2		4
1		4
1	1	1

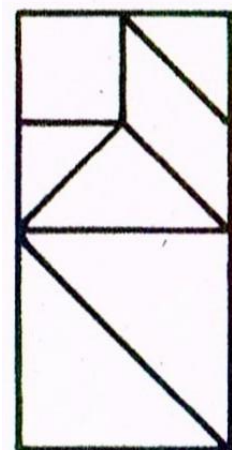
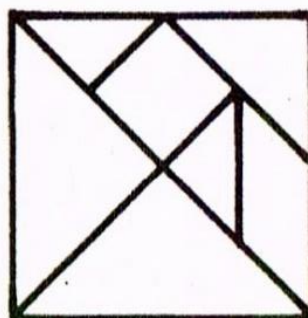
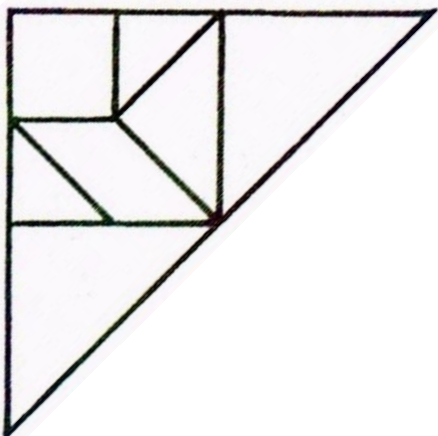
2	2	0
2		0
2		0
3	3	0

Puzzle 2

	2	6	6	1	
5	2	6	6	1	5
5	5	4	4	6	6
3	3	5	5	0	0
	6	6	5	5	

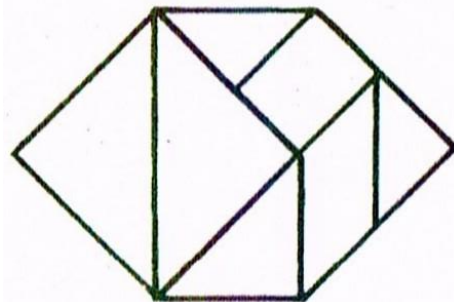
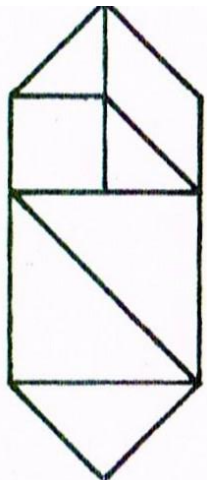
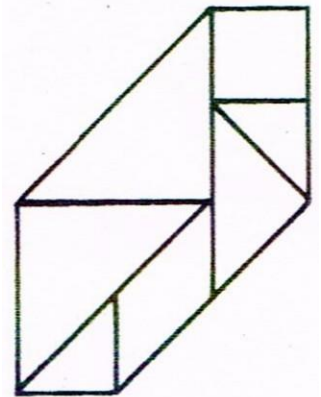
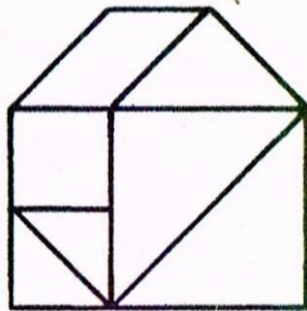
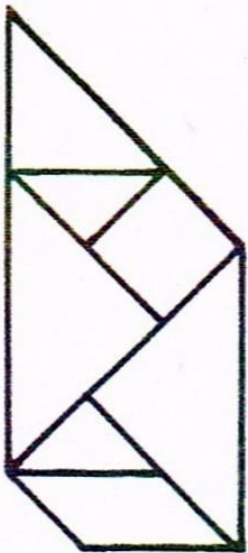
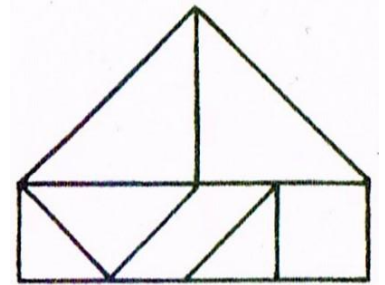
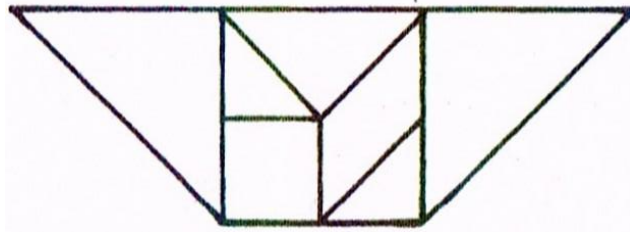
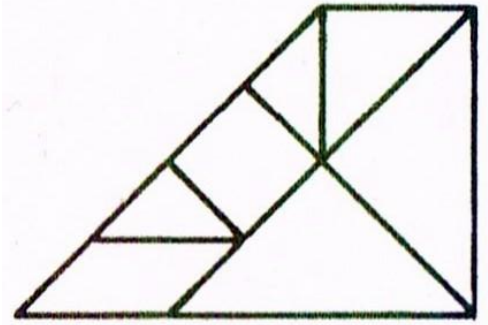
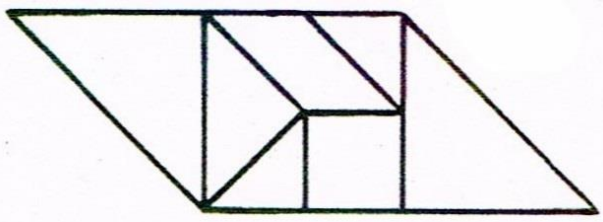
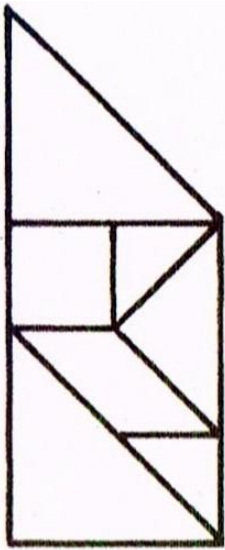
Answers – Tangrams

There are several different solutions



Answers – Tangrams

There are several different solutions



This heptagon (7 sides)
is concave

