

$n = 1$	$2 + 2 = 2 \cdot 2$	<p>A Hasse diagram with 6 nodes labeled 1 through 6. Node 1 is at the top. Nodes 2, 3, and 4 are in the second row. Nodes 5 and 6 are in the third row. Arrows indicate partial order: 1 to 2, 1 to 3, 2 to 3, 2 to 4, 3 to 4, 4 to 5, 4 to 6, 5 to 6, and 5 to 7. A red box highlights node 4.</p>		
$n = 2$	$2 + 2 = 2 \cdot 2$ $2 + 2 = 2 \cdot 2$	<p>A Hasse diagram with 10 nodes labeled 1 through 10. Node 1 is at the top. Nodes 2, 3, and 4 are in the second row. Nodes 5, 6, 7, and 8 are in the third row. Nodes 9 and 10 are in the fourth row. Arrows indicate partial order: 1 to 2, 1 to 3, 2 to 3, 2 to 4, 3 to 4, 4 to 5, 4 to 6, 5 to 6, 5 to 7, 6 to 8, 7 to 8, 7 to 9, 8 to 9, and 8 to 10. A red box highlights node 4.</p>	$5 + 1 = 2 \cdot 3$ $2 + 3 = 5 \cdot 1$	<p>A Hasse diagram with 10 nodes labeled 1 through 10. Node 1 is at the top. Nodes 2, 3, and 4 are in the second row. Nodes 5, 6, 7, and 8 are in the third row. Nodes 9 and 10 are in the fourth row. Arrows indicate partial order: 1 to 2, 1 to 3, 2 to 3, 2 to 4, 3 to 4, 4 to 5, 4 to 6, 5 to 6, 5 to 7, 6 to 8, 7 to 8, 7 to 9, 8 to 9, and 8 to 10. A red box highlights node 6.</p>
$n = 3$	$2 + 2 = 2 \cdot 2$ $2 + 2 = 2 \cdot 2$ $2 + 2 = 2 \cdot 2$	<p>A Hasse diagram with 18 nodes labeled 1 through 18. Node 1 is at the top. Nodes 2, 3, and 4 are in the second row. Nodes 5, 6, 7, 8, and 9 are in the third row. Nodes 10, 11, 12, 13, 14, and 15 are in the fourth row. Nodes 16, 17, and 18 are in the fifth row. Arrows indicate partial order: 1 to 2, 1 to 3, 2 to 3, 2 to 4, 3 to 4, 4 to 5, 4 to 6, 5 to 6, 5 to 7, 6 to 8, 7 to 8, 7 to 9, 8 to 9, 8 to 10, 9 to 11, 10 to 12, 11 to 13, 12 to 14, 13 to 15, 14 to 16, 15 to 17, and 16 to 18. A red box highlights node 4.</p>	$6 + 1 = 7 \cdot 1$ $7 + 1 = 4 \cdot 2$ $4 + 2 = 6 \cdot 1$	<p>A Hasse diagram with 18 nodes labeled 1 through 18. Node 1 is at the top. Nodes 2, 3, and 4 are in the second row. Nodes 5, 6, 7, 8, and 9 are in the third row. Nodes 10, 11, 12, 13, 14, and 15 are in the fourth row. Nodes 16, 17, and 18 are in the fifth row. Arrows indicate partial order: 1 to 2, 1 to 3, 2 to 3, 2 to 4, 3 to 4, 4 to 5, 4 to 6, 5 to 6, 5 to 7, 6 to 8, 7 to 8, 7 to 9, 8 to 9, 8 to 10, 9 to 11, 10 to 12, 11 to 13, 12 to 14, 13 to 15, 14 to 16, 15 to 17, and 16 to 18. A red box highlights node 8.</p>

$n = 4$	$2 + 2 = 2 \cdot 2$ $2 + 2 = 2 \cdot 2$ $2 + 2 = 2 \cdot 2$ $2 + 2 = 2 \cdot 2$		$5 + 1 = 3 \cdot 2$ $3 + 2 = 5 \cdot 1$ $5 + 1 = 3 \cdot 2$ $3 + 2 = 5 \cdot 1$	
$n = 4$	$6 + 1 = 7 \cdot 1$ $7 + 1 = 8 \cdot 1$ $8 + 1 = 3 \cdot 3$ $3 + 3 = 6 \cdot 1$		$7 + 1 = 8 \cdot 1$ $8 + 1 = 9 \cdot 1$ $9 + 1 = 5 \cdot 2$ $5 + 2 = 7 \cdot 1$	
$n = 5$	$2 + 2 = 2 \cdot 2$ $2 + 2 = 2 \cdot 2$		$5 + 1 = 6 \cdot 1$ $6 + 1 = 7 \cdot 1$ $7 + 1 = 4 \cdot 2$ $4 + 2 = 3 \cdot 2$ $3 + 2 = 5 \cdot 1$	
$n = 5$	$8 + 1 = 9 \cdot 1$ $9 + 1 = 10 \cdot 1$ $10 + 1 = 11 \cdot 1$ $11 + 1 = 6 \cdot 2$ $6 + 2 = 8 \cdot 1$			

$n = 6$	$2 + 2 = 2 \cdot 2$ $2 + 2 = 2 \cdot 2$		$5 + 1 = 3 \cdot 2$ $3 + 2 = 5 \cdot 1$ $5 + 1 = 3 \cdot 2$ $3 + 2 = 5 \cdot 1$ $5 + 1 = 3 \cdot 2$ $3 + 2 = 5 \cdot 1$	
	$5 + 1 = 6 \cdot 1$ $6 + 1 = 7 \cdot 1$ $7 + 1 = 8 \cdot 1$ $8 + 1 = 3 \cdot 3$ $3 + 3 = 3 \cdot 2$ $3 + 2 = 5 \cdot 1$		$6 + 1 = 7 \cdot 1$ $7 + 1 = 4 \cdot 2$ $4 + 2 = 6 \cdot 1$ $6 + 1 = 7 \cdot 1$ $7 + 1 = 4 \cdot 2$ $4 + 2 = 6 \cdot 1$	
$n = 6$	$7 + 1 = 8 \cdot 1$ $8 + 1 = 9 \cdot 1$ $9 + 1 = 10 \cdot 1$ $10 + 1 = 11 \cdot 1$ $11 + 1 = 4 \cdot 3$ $4 + 3 = 7 \cdot 1$		$9 + 1 = 10 \cdot 1$ $10 + 1 = 11 \cdot 1$ $11 + 1 = 12 \cdot 1$ $12 + 1 = 13 \cdot 1$ $13 + 1 = 7 \cdot 2$ $8 + 2 = 9 \cdot 1$	

$n = 7$ $2 + 2 = 2 \cdot 2$ $2 + 2 = 2 \cdot 2$	<p>A Hasse diagram showing the lattice of partitions of 7. Nodes are labeled with their corresponding Young diagrams. A red rectangle highlights the nodes for partitions of 7 into two parts: (6,1), (5,2), (4,3), and (3,4). Arrows indicate the covering relations between partitions.</p>	$5 + 1 = 3 \cdot 2$ $3 + 2 = 5 \cdot 1$ $5 + 1 = 6 \cdot 1$ $6 + 1 = 7 \cdot 1$ $7 + 1 = 4 \cdot 2$ $4 + 2 = 3 \cdot 2$ $3 + 2 = 5 \cdot 1$	<p>A Hasse diagram showing the lattice of partitions of 7. Nodes are labeled with their corresponding Young diagrams. A red pentagon highlights the nodes for partitions of 7 into three parts: (5,1,1), (4,2,1), (3,3,1), (3,2,2), and (2,2,3). Arrows indicate the covering relations between partitions.</p>
$n = 7$ $6 + 1 = 7 \cdot 1$ $7 + 1 = 8 \cdot 1$ $8 + 1 = 9 \cdot 1$ $9 + 1 = 5 \cdot 2$ $5 + 2 = 7 \cdot 1$ $7 + 1 = 4 \cdot 2$ $4 + 2 = 6 \cdot 1$	<p>A Hasse diagram showing the lattice of partitions of 7. Nodes are labeled with their corresponding Young diagrams. A red hexagon highlights the nodes for partitions of 7 into four parts: (4,1,1,1), (3,2,1,1), (3,1,2,1), (2,2,2,1), and (2,2,1,2). Arrows indicate the covering relations between partitions.</p>	$6 + 1 = 7 \cdot 1$ $7 + 1 = 8 \cdot 1$ $8 + 1 = 3 \cdot 3$ $3 + 3 = 6 \cdot 1$ $6 + 1 = 7 \cdot 1$ $7 + 1 = 4 \cdot 2$ $4 + 2 = 6 \cdot 1$	<p>A Hasse diagram showing the lattice of partitions of 7. Nodes are labeled with their corresponding Young diagrams. A red heptagon highlights the nodes for partitions of 7 into five parts: (3,1,1,1,1), (2,2,1,1,1), (2,1,2,1,1), (1,1,1,2,1), and (1,1,1,1,2). Arrows indicate the covering relations between partitions.</p>
$n = 7$ $10 + 1 = 11 \cdot 1$ $11 + 1 = 12 \cdot 1$ $12 + 1 = 13 \cdot 1$ $13 + 1 = 14 \cdot 1$ $14 + 1 = 15 \cdot 1$ $15 + 1 = 8 \cdot 2$ $8 + 2 = 10 \cdot 1$	<p>A Hasse diagram showing the lattice of partitions of 7. Nodes are labeled with their corresponding Young diagrams. A red octagon highlights the nodes for partitions of 7 into six parts: (2,1,1,1,1,1) and (1,1,1,1,1,2). Arrows indicate the covering relations between partitions.</p>		

$n = 8$	$2+2=2 \cdot 2$ $2+2=2 \cdot 2$		$5+1=3 \cdot 2$ $3+2=5 \cdot 1$ $5+1=3 \cdot 2$ $3+2=5 \cdot 1$ $5+1=3 \cdot 2$ $3+2=5 \cdot 1$ $5+1=3 \cdot 2$ $3+2=5 \cdot 1$	
	$5+1=3 \cdot 2$ $3+2=5 \cdot 1$ $5+1=6 \cdot 1$ $6+1=7 \cdot 1$ $7+1=8 \cdot 1$ $8+1=3 \cdot 3$ $3+3=3 \cdot 2$ $3+2=5 \cdot 1$		$5+1=6 \cdot 1$ $6+1=7 \cdot 1$ $7+1=4 \cdot 2$ $4+2=6 \cdot 1$ $6+1=7 \cdot 1$ $7+1=4 \cdot 2$ $4+2=3 \cdot 2$ $3+2=5 \cdot 1$	
	$6+1=7 \cdot 1$ $7+1=8 \cdot 1$ $8+1=9 \cdot 1$ $9+1=10 \cdot 1$ $10+1=11 \cdot 1$ $11+1=6 \cdot 2$ $6+2=4 \cdot 2$ $4+2=6 \cdot 1$		$6+1=7 \cdot 1$ $7+1=8 \cdot 1$ $8+1=9 \cdot 1$ $9+1=5 \cdot 2$ $5+2=7 \cdot 1$ $7+1=8 \cdot 1$ $8+1=3 \cdot 3$ $3+3=6 \cdot 1$	
	$6+1=7 \cdot 1$ $7+1=8 \cdot 1$ $8+1=3 \cdot 3$ $3+3=6 \cdot 1$ $6+1=7 \cdot 1$ $7+1=8 \cdot 1$ $8+1=3 \cdot 3$ $3+3=6 \cdot 1$		$7+1=8 \cdot 1$ $8+1=9 \cdot 1$ $9+1=5 \cdot 2$ $5+2=7 \cdot 1$ $7+1=8 \cdot 1$ $8+1=9 \cdot 1$ $9+1=5 \cdot 2$ $5+2=6 \cdot 1$	
	$8+1=9 \cdot 1$ $9+1=10 \cdot 1$ $10+1=11 \cdot 3$ $11+1=12 \cdot 1$ $12+1=13 \cdot 1$ $13+1=14 \cdot 1$ $14+1=5 \cdot 3$ $5+3=8 \cdot 1$		$11+1=12 \cdot 1$ $12+1=13 \cdot 1$ $13+1=14 \cdot 1$ $14+1=15 \cdot 1$ $15+1=16 \cdot 1$ $16+1=17 \cdot 1$ $17+1=9 \cdot 2$ $9+2=11 \cdot 1$	