



Lös följande ekvationer.

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| 1. a) $\cos(x) = 1$ | b) $2\sqrt{2}\sin(2x) = -2$ |
| 2. a) $-2\sqrt{2}\sin(2x) = 2$ | b) $0.78\sin(3v) = 0.41$ |
| 3. a) $0.02\cos(2v) = 0.02$ | b) $2\sin(3x) = \sqrt{3}$ |
| 4. a) $0.51\sin(5v) = 0.36$ | b) $2\cos(3x) = -\sqrt{3}$ |
| 5. a) $4\cos(2x) = -2\sqrt{3}$ | b) $\cos(x) = 0$ |
| 6. a) $2\cos(x) = \sqrt{3}$ | b) $\cos(3x) = 0$ |
| 7. a) $0.75\sin(8v) = 0.08$ | b) $4\sin(2x) = -2\sqrt{3}$ |
| 8. a) $4\sin(x) = 2\sqrt{3}$ | b) $0.38\sin(2v) = 1.20$ |
| 9. a) $\sin(3x) = 0$ | b) $\sin(3x) = -1$ |
| 10. a) $-0.10\cos(4v) = 1.12$ | b) $4\sin(x) = 2\sqrt{3}$ |
| 11. a) $-0.93\cos(5v) = 1.13$ | b) $2\sqrt{2}\cos(x) = 2$ |
| 12. a) $-\sqrt{2}\sin(x) = 1$ | b) $\sin(x) = 0$ |
| 13. a) $0.28\cos(9v) = 0.06$ | b) $-\cos(2x) = 2$ |
| 14. a) $0.04\cos(3v) = 0.04$ | b) $0.37\cos(8v) = 0.04$ |
| 15. a) $-0.18\sin(6v) = -0.09$ | b) $0.87\cos(2v) = 0.07$ |
| 16. a) $0.51\cos(v) = 1.02$ | b) $\cos(3x) = 1$ |
| 17. a) $-0.09\sin(5v) = -0.07$ | b) $-\sin(3x) = 2$ |
| 18. a) $\sqrt{2}\sin(3x) = -1$ | b) $-0.87\cos(9v) = -0.07$ |
| 19. a) $-0.54\cos(4v) = -0.36$ | b) $4\cos(3x) = 2$ |
| 20. a) $4\cos(2x) = 2$ | b) $-0.12\sin(8v) = -0.00$ |

Facit:

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| 1. a) $v_{1n} = 0^\circ + 360^\circ \cdot n$
$v_{2n} = -0^\circ + 360^\circ \cdot n$ | b) $v_{1n} = -22.5^\circ + 180^\circ \cdot n$
$v_{2n} = 112.5^\circ + 180^\circ \cdot n$ |
| 2. a) $v_{1n} = -22.5^\circ + 180^\circ \cdot n$
$v_{2n} = 112.5^\circ + 180^\circ \cdot n$ | b) $v_{1n} \approx 10.57^\circ + 120^\circ \cdot n$
$v_{2n} \approx 49.43^\circ + 120^\circ \cdot n$ |

3. a) $v_{1n} \approx 1.47^\circ + 180^\circ \cdot n$
 $v_{2n} \approx -43.53^\circ + 180^\circ \cdot n$ b) $v_{1n} = 20.0^\circ + 120^\circ \cdot n$
 $v_{2n} = 40.0^\circ + 120^\circ \cdot n$
4. a) $v_{1n} \approx 9.13^\circ + 72^\circ \cdot n$
 $v_{2n} \approx 26.87^\circ + 72^\circ \cdot n$ b) $v_{1n} = 50^\circ + 120^\circ \cdot n$
 $v_{2n} = -50^\circ + 120^\circ \cdot n$
5. a) $v_{1n} = 75^\circ + 180^\circ \cdot n$
 $v_{2n} = -75^\circ + 180^\circ \cdot n$ b) $v_{1n} = 90^\circ + 360^\circ \cdot n$
 $v_{2n} = -90^\circ + 360^\circ \cdot n$
6. a) $v_{1n} = 30^\circ + 360^\circ \cdot n$
 $v_{2n} = -30^\circ + 360^\circ \cdot n$ b) $v_{1n} = 30^\circ + 120^\circ \cdot n$
 $v_{2n} = -30^\circ + 120^\circ \cdot n$
7. a) $v_{1n} \approx 0.76^\circ + 45^\circ \cdot n$
 $v_{2n} \approx 21.74^\circ + 45^\circ \cdot n$ b) $v_{1n} = -30.0^\circ + 180^\circ \cdot n$
 $v_{2n} = 120.0^\circ + 180^\circ \cdot n$
8. a) $v_{1n} = 60.0^\circ + 360^\circ \cdot n$
 $v_{2n} = 120.0^\circ + 360^\circ \cdot n$ b) Saknar lösning
9. a) $v_{1n} = -0.0^\circ + 120^\circ \cdot n$
 $v_{2n} = 60.0^\circ + 120^\circ \cdot n$ b) $v_{1n} = -30.0^\circ + 120^\circ \cdot n$
 $v_{2n} = 90.0^\circ + 120^\circ \cdot n$
10. a) Saknar lösning b) $v_{1n} = 60.0^\circ + 360^\circ \cdot n$
 $v_{2n} = 120.0^\circ + 360^\circ \cdot n$
11. a) Saknar lösning b) $v_{1n} = 45^\circ + 360^\circ \cdot n$
 $v_{2n} = -45^\circ + 360^\circ \cdot n$
12. a) $v_{1n} = -45.0^\circ + 360^\circ \cdot n$
 $v_{2n} = 225.0^\circ + 360^\circ \cdot n$ b) $v_{1n} = -0.0^\circ + 360^\circ \cdot n$
 $v_{2n} = 180.0^\circ + 360^\circ \cdot n$
13. a) $v_{1n} \approx 8.64^\circ + 40^\circ \cdot n$
 $v_{2n} \approx -1.36^\circ + 40^\circ \cdot n$ b) $v_{1n} = 90^\circ + 180^\circ \cdot n$
 $v_{2n} = -90^\circ + 180^\circ \cdot n$
14. a) $v_{1n} \approx 7.62^\circ + 120^\circ \cdot n$
 $v_{2n} \approx -22.38^\circ + 120^\circ \cdot n$ b) $v_{1n} \approx 10.52^\circ + 45^\circ \cdot n$
 $v_{2n} \approx -0.73^\circ + 45^\circ \cdot n$
15. a) $v_{1n} \approx 4.84^\circ + 60^\circ \cdot n$
 $v_{2n} \approx 25.16^\circ + 60^\circ \cdot n$ b) $v_{1n} \approx 42.80^\circ + 180^\circ \cdot n$
 $v_{2n} \approx -2.20^\circ + 180^\circ \cdot n$
16. a) Saknar lösning b) $v_{1n} = 0^\circ + 120^\circ \cdot n$
 $v_{2n} = -0^\circ + 120^\circ \cdot n$
17. a) $v_{1n} \approx 10.60^\circ + 72^\circ \cdot n$
 $v_{2n} \approx 25.40^\circ + 72^\circ \cdot n$ b) $v_{1n} = -30.0^\circ + 120^\circ \cdot n$
 $v_{2n} = 90.0^\circ + 120^\circ \cdot n$
18. a) $v_{1n} = -15.0^\circ + 120^\circ \cdot n$
 $v_{2n} = 75.0^\circ + 120^\circ \cdot n$ b) $v_{1n} \approx 9.45^\circ + 40^\circ \cdot n$
 $v_{2n} \approx -0.55^\circ + 40^\circ \cdot n$
19. a) $v_{1n} \approx 11.97^\circ + 90^\circ \cdot n$
 $v_{2n} \approx -10.53^\circ + 90^\circ \cdot n$ b) $v_{1n} = 20^\circ + 120^\circ \cdot n$
 $v_{2n} = -20^\circ + 120^\circ \cdot n$
20. a) $v_{1n} = 30^\circ + 180^\circ \cdot n$
 $v_{2n} = -30^\circ + 180^\circ \cdot n$ b) $v_{1n} \approx 0.21^\circ + 45^\circ \cdot n$
 $v_{2n} \approx 22.29^\circ + 45^\circ \cdot n$