A.

Vypočítejte:

1. $\sin \frac{22\pi}{3} = \sin\left(\frac{22}{3}\pi - 3\cdot\frac{6}{3}\pi\right) = \sin\frac{4}{3}\pi = -\sin\left(\frac{4}{3}\pi - \pi\right) = -\sin\frac{1}{3}\pi = -\frac{\sqrt{3}}{2}$ (1/2, 1/2, 1/2)
   III. ko. → ⊖ (2,5b)

2. $\cos 1380^0 = \cos(1380^\circ - 3\cdot 360^\circ) = \cos 300^\circ = +\cos(360^\circ - 300^\circ) = \cos 60^\circ = \frac{1}{2}$
   IV. ko. → + (2,5b)

3. $\cos 960^0 = \cos(960^\circ - 2\cdot 360^\circ) = \cos 240^\circ = -\cos(240^\circ - 180^\circ) = -\cos 60^\circ = -\frac{1}{2}$
   III. ko. → ⊖ (2,5b)

4. $\cos(-495^0) = \cos(-495^\circ + 2\cdot 360^\circ) = \cos 225^\circ = -\cos(225^\circ - 180^\circ) = -\cos 45^\circ = -\frac{\sqrt{2}}{2}$
   III. ko. → ⊖ (2,5b)

5. $\cos \frac{19\pi}{6} = \cos\left(\frac{19}{6}\pi - 1\cdot\frac{12}{6}\pi\right) = \cos\frac{7}{6}\pi = -\cos\left(\frac{7}{6}\pi - \pi\right) = -\cos\frac{1}{6}\pi = -\frac{\sqrt{3}}{2}$
   III. ko. → ⊖ (2,5b)

6. $\sin\left(-\frac{52\pi}{4}\right) = \sin\left(-\frac{52}{4}\pi + 4\cdot\frac{8}{4}\pi\right) = \sin\frac{4}{4}\pi = \sin\pi = 0$ (1/2, 1/2, 1/2) (1,5b)

7. $\cos\left(-\frac{52\pi}{3}\right) = \cos\left(-\frac{52}{3}\pi + 9\cdot\frac{6}{3}\pi\right) = \cos\frac{2}{3}\pi = -\cos\left(\pi - \frac{2}{3}\pi\right) = -\cos\frac{1}{3}\pi = -\frac{1}{2}$
   II ko. → ⊖ (2,5b)

8. $\sin\left(-\frac{29\pi}{4}\right) = \sin\left(-\frac{29}{4}\pi + 4\cdot\frac{8}{4}\pi\right) = \sin\frac{3}{4}\pi = +\sin\left(\pi - \frac{3}{4}\pi\right) = \sin\frac{1}{4}\pi = \frac{\sqrt{2}}{2}$
   II. ko. → ⊕ (2,5b)

9. $\sin 780^0 = \sin(480^\circ - 2\cdot 360^\circ) = \sin 60^\circ =$ (1/2) $\frac{\sqrt{3}}{2}$ (1/2) (1,5b)

10. $\cos(-405^0) = \cos(-405^\circ + 2\cdot 360^\circ) = \cos 315^\circ = +\cos(360^\circ - 315^\circ) = \cos 45^\circ = \frac{\sqrt{2}}{2}$
    IV. → ⊕ (2,5b)

23 − 19,32
19,32 − 15,64
15,64 − 11,43
11,43 − 4,59
4,59 − 0

B.

Vypočítejte:

1. $\sin 1380^0 = \sin(1380^\circ - 3\cdot 360^\circ) = \sin 300^\circ = -\sin(360^\circ - 300^\circ) = -\sin 60^\circ = -\frac{\sqrt{3}}{2}$ (1/2, 1/2, 1/2)
   IV. kv. → ⊖ (2,5 b)

2. $\cos \frac{22\pi}{3} = \cos\left(\frac{22}{3}\pi - 3\cdot\frac{6}{3}\pi\right) = \cos\frac{4}{3}\pi = -\cos\left(\frac{4}{3}\pi - \pi\right) = -\cos\frac{1}{3}\pi = -\frac{1}{2}$
   III. kv. → ⊖ (2,5 b)

3. $\sin \frac{19\pi}{6} = \sin\left(\frac{19}{6}\pi - 1\cdot\frac{12}{6}\pi\right) = \sin\frac{4}{6}\pi = -\sin\left(\frac{4}{6}\pi - \pi\right) = -\sin\frac{1}{6}\pi = -\frac{1}{2}$
   III. kv. → ⊖ (2,5 b)

4. $\cos\left(-\frac{52\pi}{4}\right) = \cos\left(-\frac{52}{4}\pi + 4\cdot\frac{8}{4}\pi\right) = \cos\frac{4}{4}\pi = \cos\pi = -1$ (1/2, 1/2, 1/2) (1,5 b)

5. $\sin\left(-\frac{52\pi}{3}\right) = \sin\left(-\frac{52}{3}\pi + 9\cdot\frac{6}{3}\pi\right) = \sin\frac{2}{3}\pi = +\sin\left(\pi - \frac{1}{3}\pi\right) = \sin\frac{1}{3}\pi = \frac{\sqrt{3}}{2}$
   II. → ⊕ (2,5 b)

6. $\sin\left(-\frac{29\pi}{4}\right) = \sin\left(-\frac{29}{4}\pi + 4\cdot\frac{8}{4}\pi\right) = \sin\frac{3}{4}\pi = +\sin\left(\pi - \frac{3}{4}\pi\right) = \sin\frac{1}{4}\pi = \frac{\sqrt{2}}{2}$
   II. kv. → ⊕ (2,5 b)

7. $\sin 960^0 = \sin(960^\circ - 2\cdot 360^\circ) = \sin 240^\circ = -\sin(240^\circ - 180^\circ) = -\sin 60^\circ = -\frac{\sqrt{3}}{2}$
   III. kv. → ⊖ (2,5 b)

8. $\sin(-495^0) = \sin(-495^\circ + 2\cdot 360^\circ) = \sin 225^\circ = -\sin(225^\circ - 180^\circ) = -\sin 45^\circ = -\frac{\sqrt{2}}{2}$
   III. kv. → ⊖ (2,5 b)

9. $\cos 780^0 = \cos(780^\circ - 2\cdot 360^\circ) = \cos 60^\circ = \frac{1}{2}$ (1/2, 1/2, 1/2) (1,5 b)

10. $\sin(-405^0) = \sin(-405^\circ + 2\cdot 360^\circ) = \sin 315^\circ = -\sin(360^\circ - 315^\circ) = -\sin 45^\circ = -\frac{\sqrt{2}}{2}$
    IV. kv. → ⊖ (2,5 b)

23 − 19,32
19,32 − 15,64
15,64 − 11,73
11,73 − 4,59
4,59 − 0