

2.20  
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$$|\sin(\pi \cos \pi x)| = 1$$

$$\sin(\pi \cos \pi x) = 1$$

$$\pi \cos \pi x = \frac{\pi}{2} + 2\pi k$$

$$\cos \pi x = \frac{1}{2} + 2k$$

$$\cos \pi x = \frac{1}{2} \quad \text{רצף } k=0 \text{ נאם}$$

$$\pi x = \pm \frac{\pi}{3} + 2\pi n$$

$$x = \pm \frac{1}{3} + 2n$$

$$\text{רצף } |x| < 2 \text{ נאם}$$

$$\boxed{x = \pm \frac{1}{3}, \pm \frac{5}{3}}$$

$$\text{רצף } k=1 \text{ נאם}$$

$$\cos \pi x = 2\frac{1}{2}$$

אין פתרון

$$\text{רצף } k=-1 \text{ נאם}$$

$$\cos \pi x = -1\frac{1}{2}$$

אין פתרון

$$\sin(\pi \cos \pi x) = -1$$

$$\pi \cos \pi x = \frac{3\pi}{2} + 2\pi k$$

$$\cos \pi x = \frac{3}{2} + 2k$$

$$\text{רצף } k=0 \text{ נאם}$$

$$\cos \pi x = \frac{3}{2}$$

אין פתרון

$$\text{רצף } k=-1 \text{ נאם}$$

$$\cos \pi x = -\frac{1}{2}$$

$$\pi x = \pm \frac{2\pi}{3} + 2\pi n$$

$$x = \pm \frac{2}{3} + 2n$$

$$\text{רצף } |x| < 2 \text{ נאם}$$

$$\boxed{x = \pm \frac{2}{3}, \pm \frac{4}{3}}$$