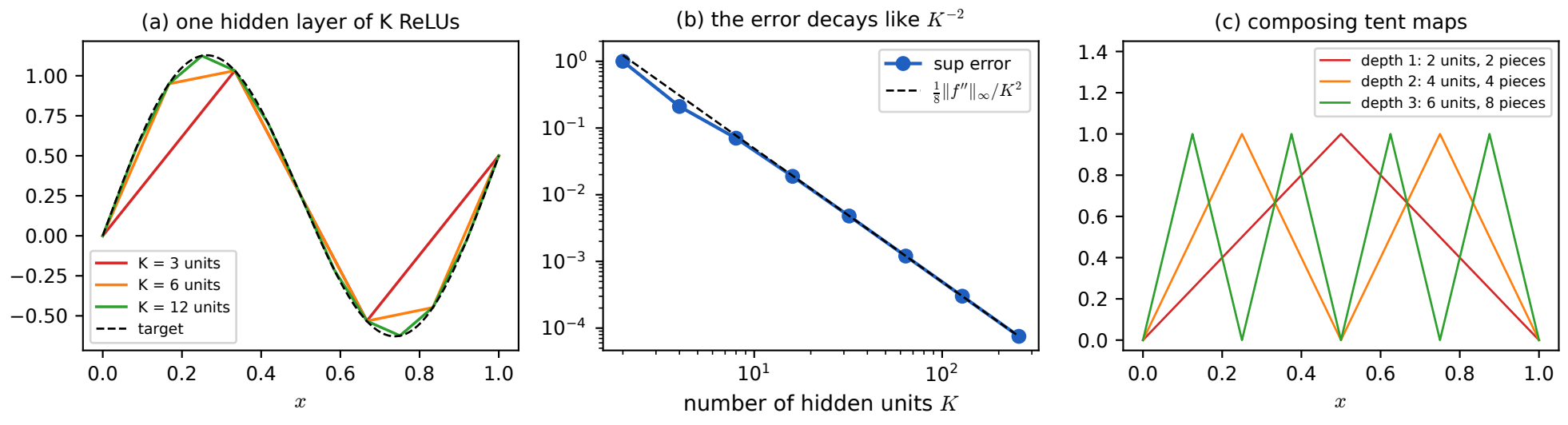

(a) one hidden layer of K ReLUs
1.00
0.75
0.50
0.25
0.00
−0.25
−0.50
K = 3 units
K = 6 units
K = 12 units
target
0.0
0.2
0.4
0.6
0.8
1.0
x
(b) the error decays like K^{-2}
10^{0}
10^{-1}
10^{-2}
10^{-3}
10^{-4}
sup error
$\frac{1}{8}\|f''\|_\infty / K^2$
10^{1}
10^{2}
number of hidden units K
(c) composing tent maps
1.4
1.2
1.0
0.8
0.6
0.4
0.2
0.0
depth 1: 2 units, 2 pieces
depth 2: 4 units, 4 pieces
depth 3: 6 units, 8 pieces
0.0
0.2
0.4
0.6
0.8
1.0
x