

FourierDCT[{1, 1, 1, 1, 1, 1, 1, 1, 1, 1}, 2]
{3.31662, 6.62675×10^{-17} , 1.28474×10^{-16} ,
 1.82697×10^{-16} , 1.12642×10^{-16} ,
 1.26492×10^{-16} , 1.09606×10^{-16} , 7.23907×10^{-17} ,
 8.34348×10^{-17} , 3.77234×10^{-17} , 9.52783×10^{-18} }

FourierDCT[{1, 1, 1, 1, 1, 1, 1, 1, 1, 1}, 3]
{4.21568, -1.38603, 0.808383, -0.552177,
 0.402772, -0.301511, 0.225709, -0.164638,
 0.112458, -0.0655898, 0.0215645}

N[Sqrt[11], 10]
3.316624790