$$2\cos x\left(\cos 5x+5\cos 3x+10\cos x\right)=$$
$$=2\cos x\cos 5x+10\cos x\cos 3x+20\cos x\cos x=$$
$$=\cos 4x+\cos 6x+5\cos 2x+5\cos 4x+10\cos 2x+10=$$
$$=\cos 6x+6\cos 4x+15\cos 2x+10$$
$$\frac{\cos 6x+6\cos 4x+15\cos 2x+10}{\cos 5x+5\cos 3x+10\cos x}\equiv 2\cos x$$