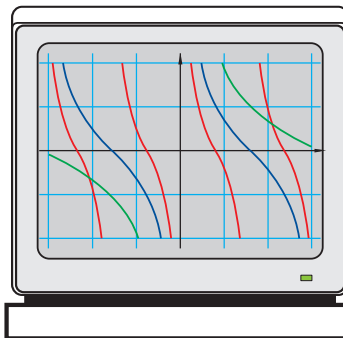
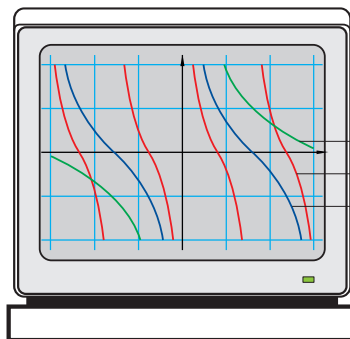


**Zadatak 3.** Na slici su grafovi funkcija  $f_1(x) = \operatorname{ctg} x$ ,  $f_2(x) = \operatorname{ctg} \frac{x}{2}$  i  $f_3(x) = \operatorname{ctg}(2x)$  nacrtani nad intervalom  $[-3, 3]$  i s vrijednostima u intervalu  $[-3, 3]$ . Možeš li otkriti kojoj od triju funkcija pripada pojedini graf?



**Rješenje.**



$$f_2(x) = \operatorname{ctg} \frac{x}{2}$$

$$f_1(x) = \operatorname{ctg} x$$

$$f_3(x) = \operatorname{ctg} 2x$$

Zaključujemo pomoću perioda:

$$P_1 = \pi,$$

$$P_2 = \frac{\pi}{\frac{1}{2}} = 2\pi,$$

$$P_3 = \frac{\pi}{2};$$

$$P_2 > P_1 > P_3.$$