Find the area between the curves:

1. $f(x) = \cos x,\ g(x) = 2 - \cos x,\ 0 \le x \le 2\pi$
2. $f(x) = \sin x,\ \ g(x) = \cos 2x,\ \ -\dfrac{\pi}{2} \le x \le \dfrac{\pi}{6}$
3. $f(x) = 2\sin x,\ \ g(x) = \tan x,\ \ -\dfrac{\pi}{3} \le x \le \dfrac{\pi}{3}$
4. $f(x) = \sec\dfrac{\pi x}{4}\tan\dfrac{\pi x}{4},\ g(x) = \left(\sqrt{2} - 4\right)x + 4,\ \ x = 0$
5. $f(x) = xe^{-x^2},\ \ y = 0,\ \ 0 \le x \le 1$
6. $f(x) = 2^x,\ \ g(x) = \dfrac{3}{2}x + 1$
7. $f(x) = 2\sin x + \sin 2x,\ \ y = 0,\ \ 0 \le x \le \pi$
8. $f(x) = 2\sin x + \cos 2x,\ \ y = 0,\ \ 0 < x \le \pi$
9. $f(x) = \dfrac{1}{x^2}e^{1/x},\ \ y = 0,\ \ 1 \le x \le 3$
10. $g(x) = \dfrac{4\ln x}{x},\ \ y = 0,\ \ x = 5$

11. $y = \sqrt{\dfrac{x^3}{4 - x}}, \quad y = 0, \quad x = 3$

12. $y = \sqrt{x}\, e^x, \quad y = 0, \quad x = 0, \quad x = 1$

13. $y = x^2, \quad y = 4 \cos x$

14. $y = x^2, \quad y = \sqrt{3 + x}$