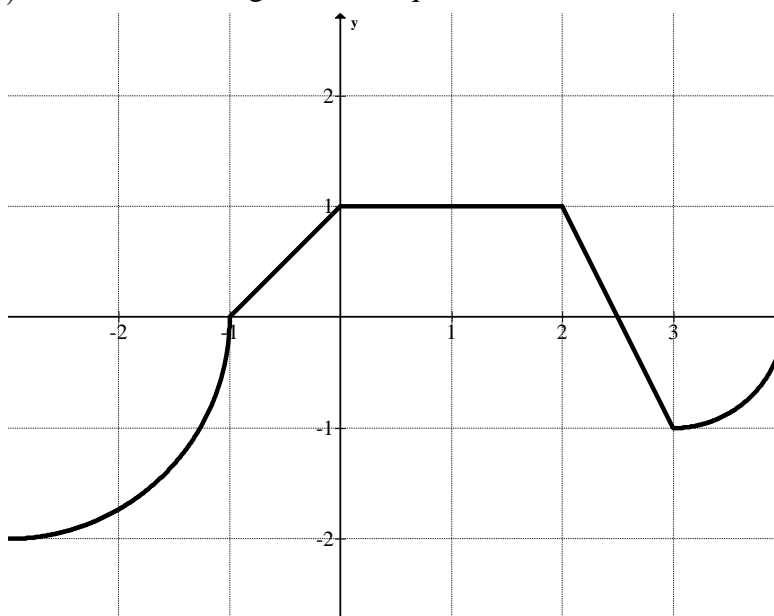


The graph of $f(x)$ consists of line segments and quarter circles as shown in the graph below.



What are the values of:

1. $\int_{-3}^{-1} f(x) dx = -\frac{1}{4}[\pi \cdot 2^2]$	$\int_{-1}^4 f(x) dx$ $= \frac{1}{2}(1)(1) + 1 + 1 + \frac{1}{2}\left(\frac{1}{2}\right)(1) - \frac{1}{2}\left(\frac{1}{2}\right)(1) - \frac{1}{4}[\pi \cdot 1^2]$
2. $\int_{-1}^4 f(x) dx$	$\int_{-1}^4 f(x) dx = 2.75 - 0.25 - \frac{1}{4}\pi(1)^2$
3. $\int_{-1}^0 f(x) dx = -\frac{1}{2}(1)(1)$	$\int_{-3}^4 f(x) dx$ $= \int_{-3}^{-1} f(x) dx + \int_{-1}^4 f(x) dx$ $= -\frac{1}{4}[\pi \cdot 2^2] + \frac{1}{2}(1)(1) + 1 + 1 + \frac{1}{2}\left(\frac{1}{2}\right)(1) - \frac{1}{2}\left(\frac{1}{2}\right)(1) - \frac{1}{4}[\pi \cdot 1^2]$
4. $\int_{-3}^4 f(x) dx$	$\int_{-3}^4 f(x) dx = -\frac{1}{4}\pi(2)^2 + 2.75 - 0.25 - \frac{1}{4}\pi(1)^2$
5. $\int_2^3 f(x) dx = 0$	$\int_{-1}^{-3} f(x) dx$ $= -\int_{-3}^{-1} f(x) dx$ $= \frac{1}{4}[\pi \cdot 2^2]$
6. $\int_{-1}^{-3} f(x) dx$	$\int_{-1}^{-3} f(x) dx = \frac{1}{4}\pi(2)^2$

7. $\int_{-1}^3 2f(x)dx$	$\int_{-1}^3 2f(x)dx = 2\int_{-1}^3 f(x)dx = 2[2.5]$
8. $\int_2^3 -2f(x) + 5dx$	$\int_2^3 -2f(x) + 5dx = \int_2^3 -2f(x)dx + \int_2^3 5dx$ $= (-2) \cdot \int_2^3 f(x)dx + \int_2^3 5dx$ $= -2(0) + (1)(5)$ $= 5$
9. $\int_2^{-1} f(x)dx$	$\int_2^{-1} f(x)dx = -\int_{-1}^2 f(x)dx = -[2.5]$
10. $\int_2^2 f(x)dx$	$\int_2^2 f(x)dx = 0$
11. $\int_4^{-3} f(x)dx$	$\int_4^{-3} f(x)dx = -\left[\int_{-3}^4 f(x)dx\right] = -\left[-\frac{1}{4}\pi(2)^2 + 2.75 - 0.25 - \frac{1}{4}\pi(1)^2\right]$
12. $\int_4^{-1} f(x)dx$	$\int_4^{-1} f(x)dx = -\left[\int_{-1}^4 f(x)dx\right] = -\left[2.75 - 0.25 - \frac{1}{4}\pi(1)^2\right]$
13. $\int_{30}^{50} g(x)dx =$	$\int_{30}^{50} g(x)dx = \int_{30}^{100} g(x)dx - \int_{50}^{100} g(x)dx$ $= A - B$
14. $\int_3^{-2} h(x)dx =$	$\int_3^{-2} h(x)dx = -\left[\int_{-2}^3 h(x)dx\right]$ $= -\left[\int_{-2}^4 h(x)dx - \int_3^4 h(x)dx\right]$ $= -[A - B]$ $= B - A$