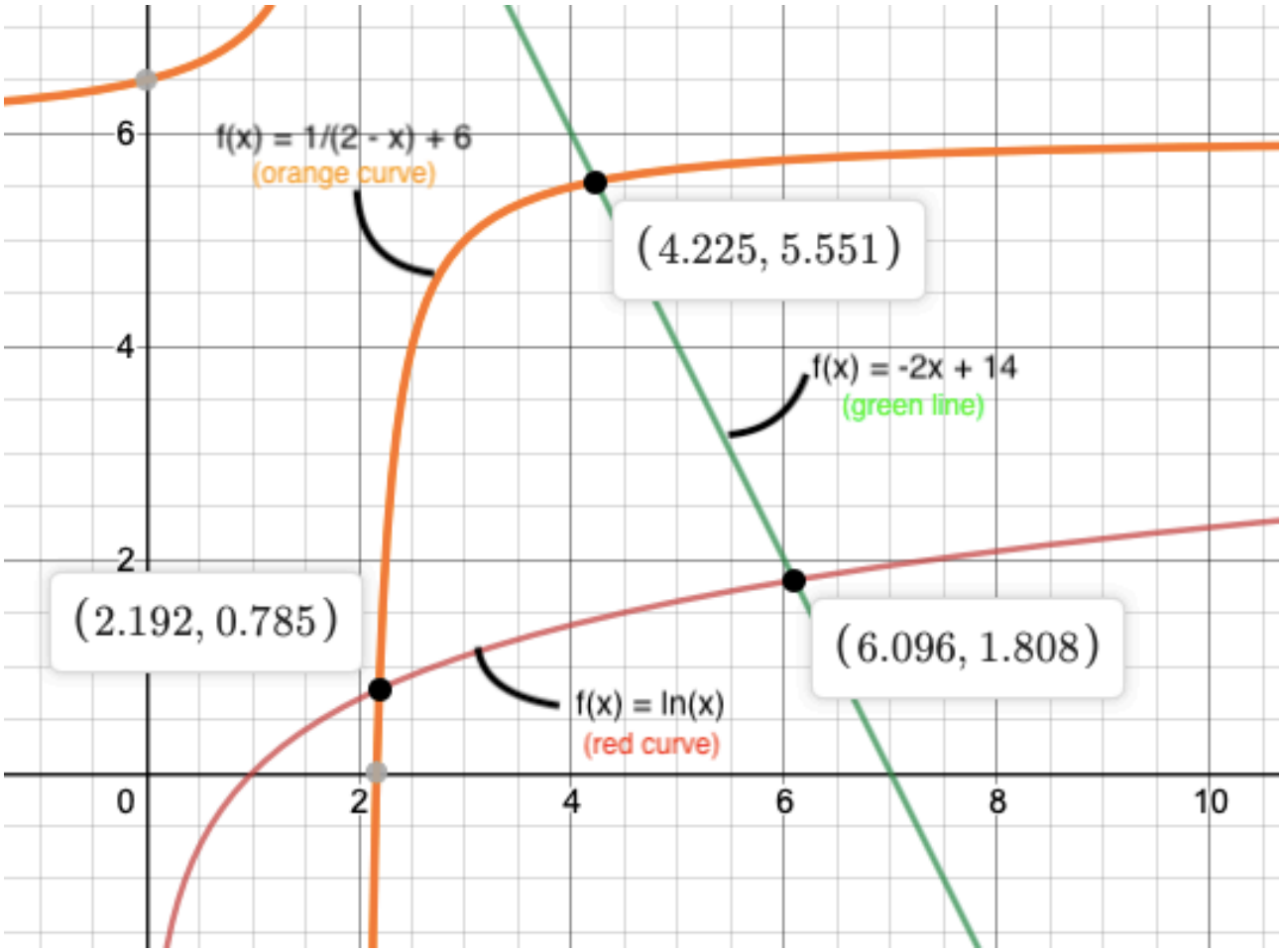
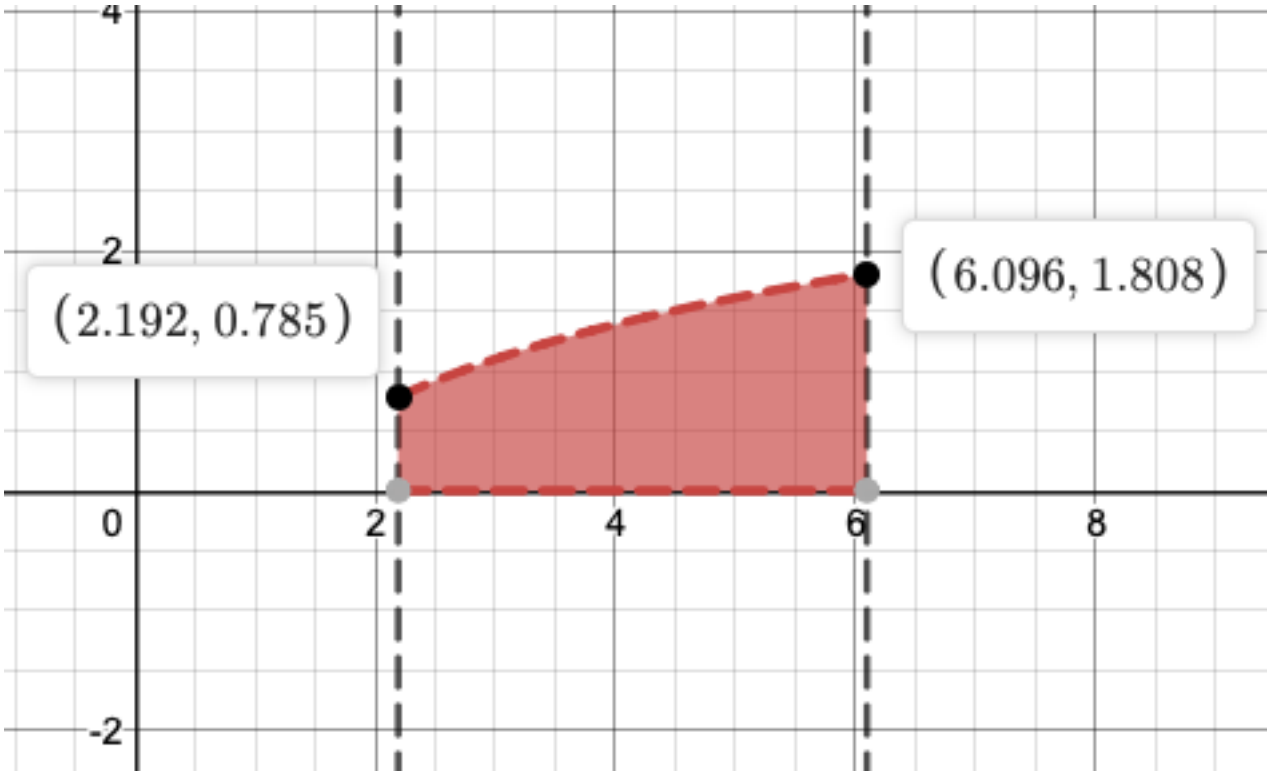
Results and images

The given curves are f(x) = ln(x) (red curve on graph), f(x) = -2x + 14 (green line on graph), f(x) = 1 / (2 - x) + 6 (orange curve on graph).

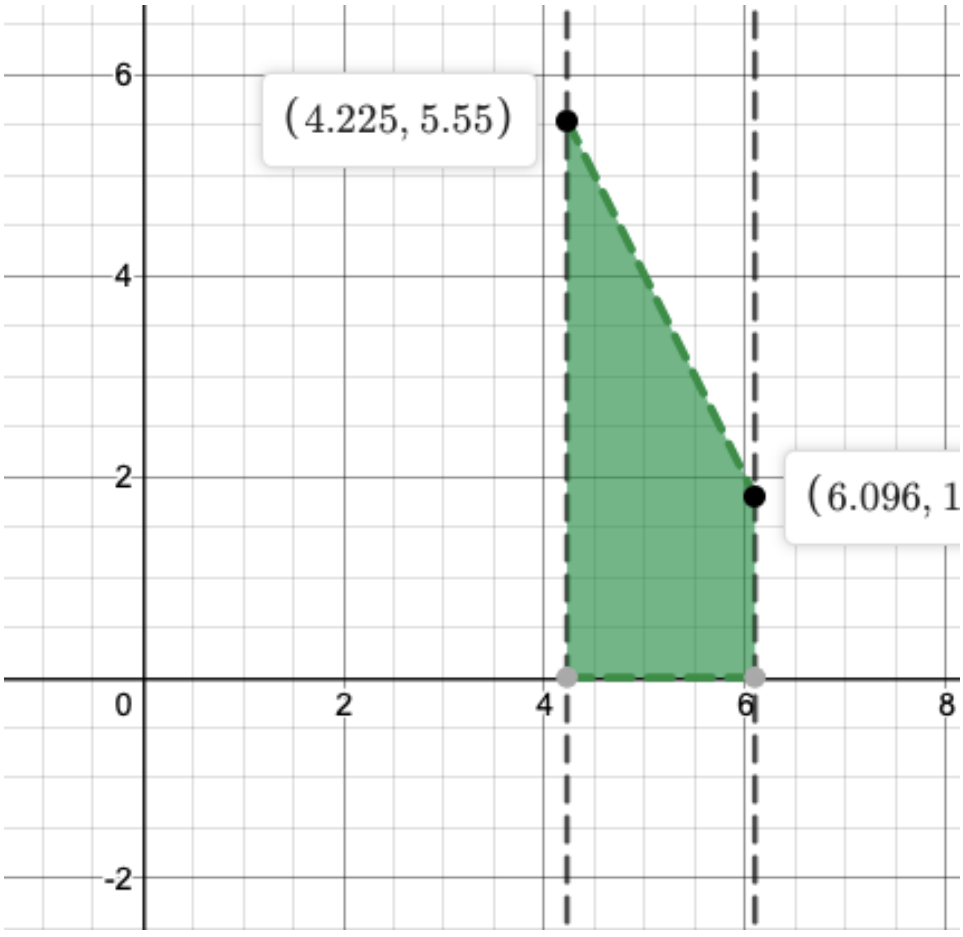


Curve intersection points:
x1 = 6.096170 - between red (1st) and green (2nd) curve,
x2 = 2.191743 - between red (1st) and orange (3rd) curve,
x3 = 4.224745 - between green (2nd) and orange (3rd) curve.

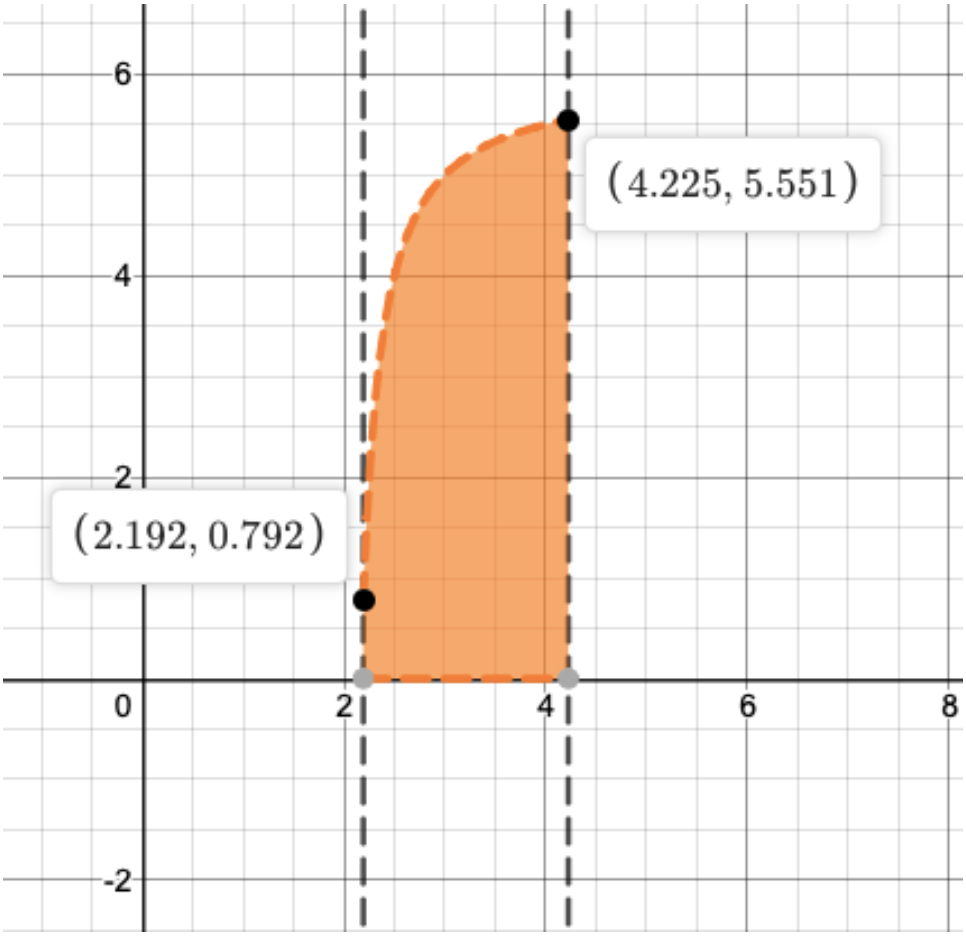
1) Area under 1st (red) curve : 5.39552:



2) Area under 2nd curve (green): 6.88513:



3) Area under 3rd curve (orange): 9.74677:



The result:
Area between given curves with eps = 0.001: 11.23638: