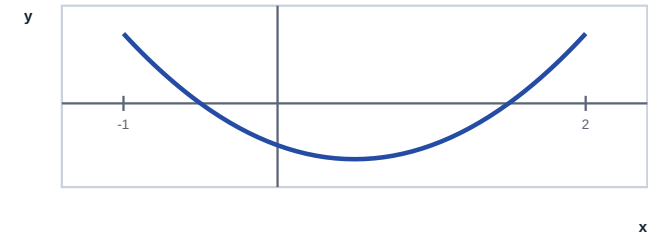


Area Under a Curve

Find total geometric area between the function and the x-axis. Split at every interior zero and add positive segment areas.

1. Find total geometric area on [-1, 2].

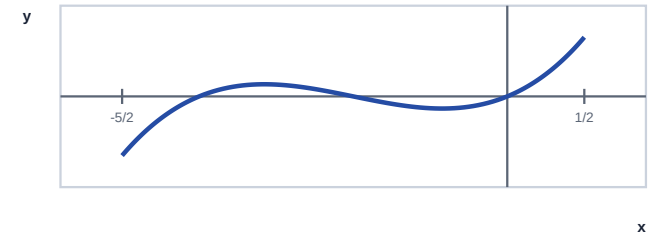
$f(x) = x^2 - x - \frac{3}{4}$



Shade, split at zeros, and add positive areas:

2. Find total geometric area on [-5/2, 1/2].

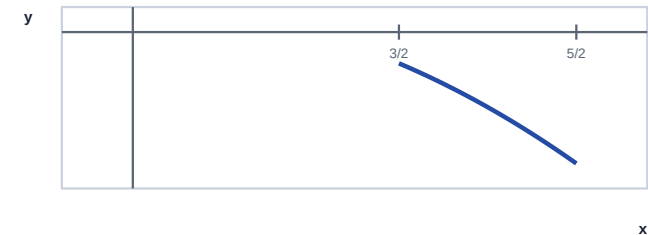
$f(x) = \frac{1}{2} \cdot x^3 + \frac{3}{2} \cdot x^2 + x$



Shade, split at zeros, and add positive areas:

3. Find total geometric area on [3/2, 5/2].

$f(x) = -\frac{1}{2} \cdot x^2 + \frac{1}{2}$



Shade, split at zeros, and add positive areas:

4. Find total geometric area on [7/2, 4].

$f(x) = -\frac{1}{2} \cdot x^3 + 3 \cdot x^2 - \frac{11}{2} \cdot x + 3$



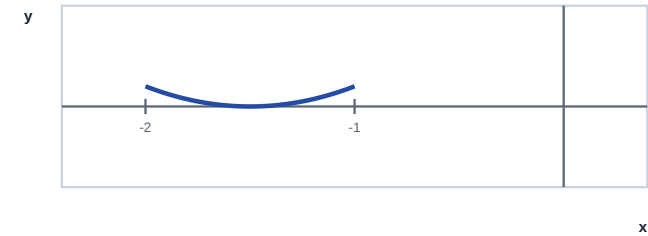
Shade, split at zeros, and add positive areas:

Area Under a Curve

Find total geometric area between the function and the x-axis. Split at every interior zero and add positive segment areas.

5. Find total geometric area on [-2, -1].

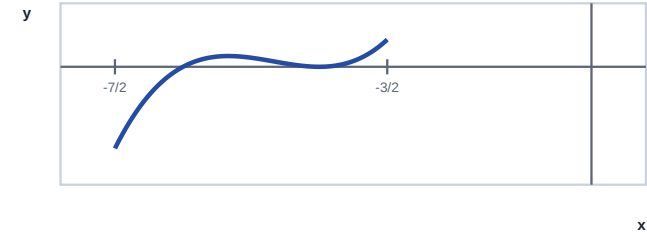
$f(x) = \frac{1}{2} \cdot x^2 + \frac{3}{2} \cdot x + \frac{9}{8}$



Shade, split at zeros, and add positive areas:

6. Find total geometric area on [-7/2, -3/2].

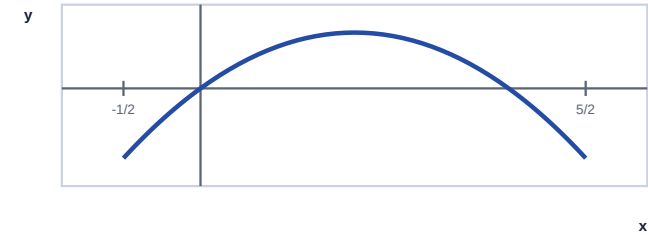
$f(x) = x^3 + 7 \cdot x^2 + 16 \cdot x + 12$



Shade, split at zeros, and add positive areas:

7. Find total geometric area on [-1/2, 5/2].

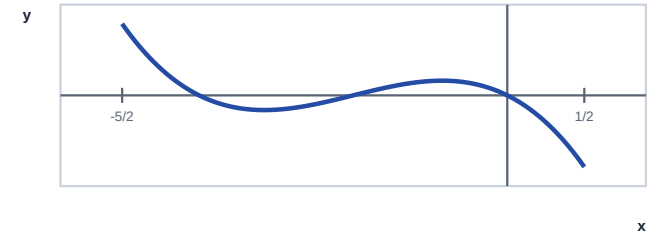
$f(x) = -x^2 + 2 \cdot x$



Shade, split at zeros, and add positive areas:

8. Find total geometric area on [-5/2, 1/2].

$f(x) = -x^3 - 3 \cdot x^2 - 2 \cdot x$



Shade, split at zeros, and add positive areas: