Practice worksheet | Integration

Signed area versus geometric area

Name: _____ Date: _____

6 questions | 18 marks

1. Find the area between $y = x - 2$ and the axis on $[0, 4]$. [3 marks]

2. Find $\int_{-2}^{2} x\,dx$ and the corresponding geometric area. [3 marks]

3. Find the area under $y = 4 - x^2$ on $[-2, 2]$. [3 marks]

4. Find the area between $y = x(x - 2)$ and the axis on $[0, 3]$. [3 marks]

5. Find the area between $y = \sin x$ and the axis on $[0, 2\pi]$. [3 marks]

6. A student says an integral of 0 proves that an area is 0. Give a counterexample. [3 marks]