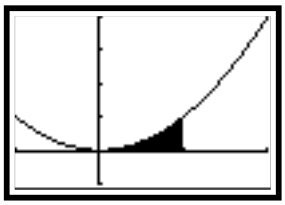
Problems for Gateway #2: Describing Areas with Integral Notation

1. Circle the integral notation that does the best job of representing the shaded area:



(a) $\int_0^1 x^2 dx$.

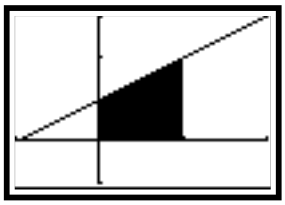
(b) $\int_0^1 (1+x) dx$.

(c) $\int_0^{10} (3-x) dx$.

(d) $\int_0^2 (3-|x|) dx$.

(e) $\int_0^1 (1+2^x) dx$.

2. Circle the integral notation that does the best job of representing the shaded area:



(a) $\int_0^1 x^2 dx$.

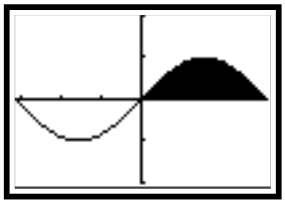
(b) $\int_0^1 (1+x) dx$.

(c) $\int_0^{\pi} 2x \cdot dx$.

(d) $\int_0^{\pi/2} -3x \cdot dx$.

(e) $\int_0^1 (1+2^x) dx$.

3. Circle the integral notation that does the best job of representing the shaded area:



(a) $\int_0^1 x^2 dx$.

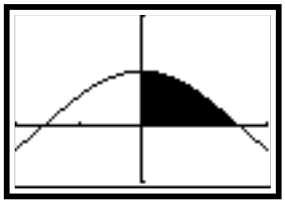
(b) $\int_0^1 (1+x) dx$.

(c) $\int_0^3 x \cdot (x-3) \cdot (x+3) \cdot dx$.

(d) $\int_{-3}^0 x \cdot dx$.

(e) $\int_0^1 (1+2^x) dx$.

4. Circle the integral notation that does the best job of representing the shaded area:



(a) $\int_0^1 x^2 dx$.

(b) $\int_0^1 (1+x) dx$.

(c) $\int_0^2 (3 \cdot x + 7) \cdot dx$.

(d) $\int_0^{1.5} \left(1 - \left(\frac{2x}{3}\right)^2\right) \cdot dx$.

(e) $\int_0^1 (1+2^x) dx$.

5. Circle the integral notation that does the best job of representing the shaded area:

(a) $\int_0^1 x^2 dx$.

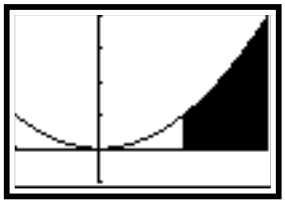
(b) $\int_0^1 (1+x) dx$.

(c) $\int_0^2 x^3 \cdot dx$.

(d) $\int_{-2}^2 \left(x - \frac{1}{4}\right) \cdot dx$.

(e) $\int_0^1 \left(1 + 2^x\right) dx$.

6. Circle the integral notation that does the best job of representing the shaded area:



(a) $\int_1^2 x^2 dx$.

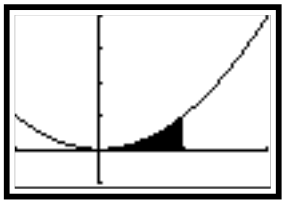
(b) $\int_0^1 x^2 dx$.

(c) $\int_1^2 \ln(x) dx$.

(d) $\int_2^4 \ln(x) dx$.

(e) $\int_1^{1.5} \frac{1}{45}(x-1.5) \cdot (x+1.5) \cdot (x-4.5) \cdot (x+4.5) \cdot dx$.

7. Circle the integral notation that does the best job of representing the shaded area:



(a) $\int_{1}^{2} x^2 dx$.

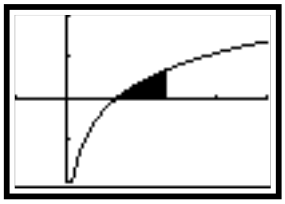
(b) $\int_{0}^{1} x^2 dx$.

(c) $\int_{1}^{2} \ln(x) dx$.

(d) $\int_{2}^{4} \ln(x) dx$.

(e) $\int_{1}^{1.5} \frac{1}{45}(x-1.5)\cdot(x+1.5)\cdot(x-4.5)\cdot(x+4.5)\cdot dx$.

8. Circle the integral notation that does the best job of representing the shaded area:



(a) $\int_{1}^{2} x^2 dx$.

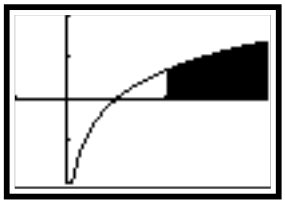
(b) $\int_{0}^{1} x^2 dx$.

(c) $\int_{1}^{2} \ln(x) dx$.

(d) $\int_{2}^{4} \ln(x) dx$.

(e) $\int_{1}^{1.5} \frac{1}{45}(x-1.5)\cdot(x+1.5)\cdot(x-4.5)\cdot(x+4.5)\cdot dx$.

9. Circle the integral notation that does the best job of representing the shaded area:



(a) $\int_{1}^{2} x^2 dx$.

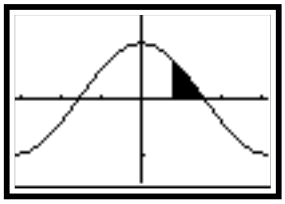
(b) $\int_{0}^{1} x^2 dx$.

(c) $\int_{1}^{2} \ln(x) dx$.

(d) $\int_{2}^{4} \ln(x) dx$.

(e) $\int_{1}^{1.5} \frac{1}{45}(x-1.5)\cdot(x+1.5)\cdot(x-4.5)\cdot(x+4.5)\cdot dx$.

10. Circle the integral notation that does the best job of representing the shaded area:



(a) $\int_{1}^{2} x^2 dx$.

(b) $\int_{0}^{1} x^2 dx$.

(c) $\int_{1}^{2} \ln(x) dx$.

(d) $\int_{2}^{4} \ln(x) dx$.

(e) $\int_{1}^{1.5} \frac{1}{45}(x-1.5)\cdot(x+1.5)\cdot(x-4.5)\cdot(x+4.5)\cdot dx$.

Answers

1.	A	2.	B	3.	C	4.	D	5.	E	6.	A
7.	B	8.	C	9.	D	10.	E				