Candle Center - Infinite Calculus

Name_____

Integration

Date_____ Period____

Evaluate each indefinite integral.

1) $\int \frac{1}{\sqrt{16 - x^2}}\, dx$

2) $\int \frac{1}{4 + x^2}\, dx$

3) $\int \frac{1}{x\sqrt{x^2 - 1}}\, dx$

4) $\int \frac{1}{16 + x^2}\, dx$

5) $\int \frac{1}{x\sqrt{x^2 - 4}}\, dx$

6) $\int \frac{1}{\sqrt{25 - x^2}}\, dx$

7) $\int \frac{1}{x\sqrt{x^2 - 81}}\, dx$

8) $\int \frac{1}{4 + x^2}\, dx$

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Evaluate each indefinite integral.

1) $\int \frac{1}{\sqrt{16 - x^2}}\,dx$

$\sin^{-1}\frac{x}{4} + C$

2) $\int \frac{1}{4 + x^2}\,dx$

$\frac{1}{2} \cdot \tan^{-1}\frac{x}{2} + C$

3) $\int \frac{1}{x\sqrt{x^2 - 1}}\,dx$

$\sec^{-1}|x| + C$

4) $\int \frac{1}{16 + x^2}\,dx$

$\frac{1}{4} \cdot \tan^{-1}\frac{x}{4} + C$

5) $\int \frac{1}{x\sqrt{x^2 - 4}}\,dx$

$\frac{1}{2} \cdot \sec^{-1}\frac{|x|}{2} + C$

6) $\int \frac{1}{\sqrt{25 - x^2}}\,dx$

$\sin^{-1}\frac{x}{5} + C$

7) $\int \frac{1}{x\sqrt{x^2 - 81}}\,dx$

$\frac{1}{9} \cdot \sec^{-1}\frac{|x|}{9} + C$

8) $\int \frac{1}{4 + x^2}\,dx$

$\frac{1}{2} \cdot \tan^{-1}\frac{x}{2} + C$