

Geometric Interpretations.

1. $\frac{1}{3}$
2. 12
3. 7
4. e
5. $2\pi \ln a$
6. $\frac{\pi}{2}$

Combinatorial Applications.

1. $\frac{4 + \ln 3}{8}$
2. $\frac{1}{2}$
3. $2 \ln 2 - 1$
4. $\frac{2 - \ln^2 2 - \ln 4}{4}$
5. $\frac{1 + \ln 2}{2}$
6. 1

Algebraic Manipulations.

1. $\frac{486}{5}$
2. $\frac{14}{3}$
3. 26
4. $n!$
5. 5
6. $\frac{1}{2}$

Assorted Integrals.

1. $\frac{20}{3}$
2. $\frac{5}{2} \ln \frac{8}{3}$
3. 5
4. $\ln 2 - 1$
5. $\frac{\pi}{4}$
6. $\frac{2}{5}$
7. $\frac{\pi}{8}$
8. $2 - \frac{\pi^2}{6}$
9. $\frac{\pi \ln \pi}{2}$
10. $\frac{1}{2}$
11. $\frac{\pi^2}{8}$
12. $\frac{\pi^2}{2}$
13. $\frac{\pi}{2e}$