

1. **Answer:**  $\frac{3\sqrt{2}}{2}$
  2. **Answer:**  $\frac{256}{7}$
  3. **Answer:**  $\frac{27}{2}$
  4. **Answer:**  $\frac{5}{12}$
  5. **Answer:**  $\frac{128}{3}$
  6. **Answer:**  $\frac{1}{e}$
  7. **Answer:**  $14 \ln \left(\frac{3}{2}\right)$
  8. **Answer:**  $\frac{2\sqrt{2023}}{e} + \frac{2023}{2e^2}$
  9. **Answer:**  $5\pi$
  10. **Answer:**  $\frac{\pi}{2}(e - 1)$
-