This is a fake quiz, this is only a fake quiz. In the event of an actual quiz, you'd have been given fair warning. Repeat: This is only a fake quiz.

1. Compute \( \int_C (x^2+y^2) \, dx - x \, dy \) along the quarter circle from (1,0) to (0,1).

2. Evaluate \( \int_C (\sin y \sin x + \cos y \cos x) \, dx + (\cos y \cos x - \sin y \sin x) \, dy \) where \( C \) is the line segment from (1,0) to \((2, \frac{\pi}{2})\).

3. Evaluate \( \iint_S \mathbf{F} \cdot d\mathbf{S} \), where \( \mathbf{F}(x,y,z) = 4x \mathbf{i} - 3y \mathbf{j} + 7z \mathbf{k} \) and \( S \) is the surface of the cube bounded by the coordinate planes and the planes \( x=1, y=1, \) and \( z=1 \).

4. Evaluate \( \iint_S \mathbf{F} \cdot d\mathbf{S} \), where \( \mathbf{F}(x,y,z) = x \mathbf{i} + y \mathbf{j} + 2z \mathbf{k} \) and \( S \) is the portion of the cone \( z^2 = x^2 + y^2 \) between the planes \( z = 1 \) and \( z = 2 \), oriented upwards.

5. Evaluate \( \int_C (x^2-y) \, dx + x \, dy \), where \( C \) is the circle \( x^2 + y^2 = 4 \) with counterclockwise orientation.

6. Evaluate \( \iint_S \langle x^2, x^2, xy \rangle \cdot d\mathbf{S} \), where \( S \) is the surface of the solid bounded by \( z=4-x^2, y+z=5, z=0, \) and \( y=0 \).

7. Compute \( \int_C \mathbf{F} \cdot d\mathbf{r} \) where \( \mathbf{F}(x,y,z) = y \mathbf{i} + z \mathbf{j} - x \mathbf{k} \) and \( C \) is the line segment from \((1,1,1)\) to \((-3,2,0)\).

8. Compute \( \int_C \left( \ln(1+y), -\frac{xy}{1+y} \right) \cdot d\mathbf{r} \) where \( C \) is the triangle with vertices \((0,0), \) \((2,0), \) and \((0,4)\).

9. Evaluate \( \int_0^\pi \int_0^1 y \sin x \, dx - \cos x \, dy \).

10. Compute \( \iint_S \mathbf{F} \cdot d\mathbf{S} \), where \( \mathbf{F}(x,y,z) = 2y \mathbf{j} + \mathbf{k} \) and \( S \) is the portion of the paraboloid \( z = x^2 + y^2 \) below the plane \( z = 4 \) with positive orientation.