

EXACT EQUATIONS

MATH 3425, FALL 2015

Determine which of these equations are exact. Solve those that are exact.

Task 1.

$$\left(x + \frac{2}{y}\right) dy + y dx = 0$$

Task 2.

$$(\sin(x) \tan(y) + 1) dx + \cos(x) \sec^2(y) dy = 0$$

Task 3.

$$(y - x^3) dx + (x + y^3) dy = 0$$

Task 4.

$$(2y^2 - 4x + 5) dx = (4 - 2y + 4xy) dy$$

Task 5.

$$(y + y \cos(xy)) dx + (x + x \cos(xy)) dy = 0$$