

No calculators

PRINT NAME

PERM NUMBER

TA: ☐ Trevor  
☐ FabioTime: ☐ 4:30 ☐ 6:30  
☐ 5:30 ☐ 7:30

**Today we will be working in groups of 3.** Discuss the following questions about exact equations with your group, and write down the answers your group comes up with. You can each write the same things, but **everyone in the group must turn in their own quiz.**

1. Why do you think exact differential equations are called “exact”? [There is a “right” answer here.]
2. When you are deciding how to solve a given DE, what would give you the suspicion that it might be exact? [Is there a form they usually come in?]
3. If you suspect that a differential equation is probably exact, how can you know for sure?
4. How do you solve an exact differential equation?

5. Make up your own exact differential equation and solve it below. [Your answer here should be different from the other members of your group]

6. Each member in turn, explain your solution to the rest of the group. While you are listening, write each differential equation and its solution below. [You don't need to copy all the work to solve, just listen to your groupmates' explanations.]

i.

Equation:

Solution:

ii.

Equation:

Solution:

iii.

Equation:

Solution: