SEPARABLE DIFFERENTIAL EQUATIONS WORKSHEET

MATH 3 / FALL 2012

(a) Separate the x's and the y's

(b) Integrate both sides

(c) Solve for y

1. $y' = -\pi$

2. $y' = y^2 x$

3. $y' = yx^2$

4. $y' = \sin(x)\tan(y)$

5. $y' = e^x \cos^2(y)$

6. $y' = x(x-2)/y$

7. $y' = x^2 e^{-y} - 2xe^{-y}$

8. $y'\sqrt{y - x^2 y} = -xy$

9. $x^2 + 2yy' = 3x$

10. $x^2 y' + 2xy = 3x$