3-0235 — 50 SHEETS — 5 SQUARES
3-0236 — 100 SHEETS — 5 SQUARES
3-0237 — 200 SHEETS — 5 SQUARES
3-0137 — 200 SHEETS — FILLER
COMET

2) $4x^2 + 9y^2 = 36$

$8x + 18yy' = 0$

$18yy' = -8x$

$y' = \frac{-8x}{18y}$

$\boxed{y' = -\frac{4x}{9y}}$

7) $x^2 + xy - y^2 = 4$

$2x + xy' + y - 2yy' = 0$

$xy' - 2yy' = -y - 2x$

$y'(x - 2y) = -y - 2x$

$\boxed{y' = \frac{-y-2x}{(x-2y)}}$ or $\boxed{y' = \frac{2x+y}{2y-x}}$

10) $y^5 + x^2y^3 = 1 + ye^{x^2}$

$5y^4y' + 2xy^3 + x^2 3y^2y' = y'e^{x^2} + ye^{x^2}2x$

$5y^4y' + 3x^2y^2y' - e^{x^2}y' = -2xy^3 + 2xye^{x^2}$

$y'(5y^4 + 3x^2y^2 - e^{x^2}) = 2xy(e^{x^2} - y^2)$

$\boxed{y' = \frac{2xy(e^{x^2} - y^2)}{(5y^4 + 3x^2y^2 - e^{x^2})}}$

12) $1 + x = \sin(xy^2)$

$1 = \cos(xy^2)\cdot(y^2 + 2yy'x)$

$1 = 2xy\cos(xy^2)y' + y^2\cos(xy^2)$

$\boxed{y' = \frac{1 - y^2\cos(xy^2)}{2xy\cos(xy^2)}}$

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21) $f(x) + x^2[f(x)]^3 = 10$, $f(1) = 2$

find $f'(1)$

$f'(x) + x^2\, 3[f(x)]^2 \cdot f'(x) + 2x[f(x)]^3 = 0$

$f'(x)\left(1 + 3x^2[f(x)]^2\right) = -2x[f(x)]^3$

$f'(x) = \dfrac{-2x[f(x)]^3}{1 + 3x^2[f(x)]^2}$

$$\boxed{f'(1) = \frac{-2 \cdot 1\,[2]^3}{1 + 3 \cdot 1^2 \cdot 2^2} = -\frac{16}{13}}$$

25) $x^2 + xy + y^2 = 3 \quad (1,1)$

$2x + xy' + y + 2yy' = 0$

$xy' + 2yy' = -2x - y$

$y'(x + 2y) = -2x - y$

$y' = \dfrac{-(2x + y)}{(x + 2y)}$

y' at $(1,1)$ $\quad \dfrac{-(2+1)}{1+2} = -1$

$y - y_1 = m(x - x_1)$

$y - 1 = -1(x - 1)$

$\boxed{y = -x + 2}$