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> F:= (x,y)  x^3*y^2 - y^3*x^2 + sin(x*y);
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$$F := (x, y) \quad x^3 \cdot y^2 - y^3 \cdot x^2 + \sin(y \cdot x) \quad (1)$$

$$\triangleright \text{diff}(F(x,y),y);$$

$$2x^3y - 3y^2x^2 + x\cos(yx) \quad (2)$$

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> diff(F(x,y),x$2);
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$$6xy^2 - 2y^3 - y^2 \sin(yx) \quad (3)$$

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> diff(F(x,y),x$2,y$2);
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$$12x - 12y - 2\sin(yx) - 4yx\cos(yx) + y^2x^2\sin(yx) \quad (4)$$

$$\triangleright D[1,2](F)(1/2, -1);$$

$$-\frac{9}{2} + \cos\left(\frac{1}{2}\right) - \frac{\sin\left(\frac{1}{2}\right)}{2} \quad (5)$$

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> int(cos(x)*sin(x)/sqrt(cos(x)^2+16),x=0..Pi/2);
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$$-4 + \sqrt{17} \quad (6)$$

