## Problems: Normal Form of Green's Theorem

Use geometric methods to compute the flux of $\mathbf{F}$ across the curves $C$ indicated below, where the function $g(r)$ is a function of the radial distance $r$.

1. $\mathbf{F}=g(r)\langle x, y\rangle$ and $C$ is the circle of radius $a$ centered at the origin and traversed in a clockwise direction.
2. $\mathbf{F}=g(r)\langle-y, x\rangle ; C$ as above.
3. $\mathbf{F}=3\langle 1,1\rangle ; C$ is the line segment from $(0,0)$ to $(1,1)$.
4. $\mathbf{F}=3\langle-1,1\rangle ; C$ is the line segment from $(0,0)$ to $(1,1)$.

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### 18.02SC Multivariable Calculus

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