## Classic Mathematical Proofs

| Geometric | Direct | Induction | Contradiction | Misleading |
| :---: | :---: | :---: | :---: | :---: |
| Pythagoras | Sum of consecutive <br> squares are odd | Euler's formula for <br> polyhedra | $\sqrt{2}$ is irrational | 1=2 |
| Angles in triangle | $(a+b)(a+b)=a^{2}+2 a b+b^{2}$ | Sum of $n$ integers $=\frac{n}{2}(n+1)$ | Primes continue to <br> infinity |  |
| Triangle numbers | Pythagorean triples |  | Bridges of Konigsberg |  |
| Angles in semicircle | $0 . \dot{9}=1$ |  |  |  |
| $(a+b)(a+b)=a^{2}+2 a b+b^{2}$ |  |  |  |  |

