# principal ideal

| | |
|---|---|
| Canonical name | PrincipalIdeal |
| Date of creation | 2013-03-22 11:51:49 |
| Last modified on | 2013-03-22 11:51:49 |
| Owner | djao (24) |
| Last modified by | djao (24) |
| Numerical id | 7 |
| Author | djao (24) |
| Entry type | Definition |
| Classification | msc 13A15 |
| Classification | msc 16D25 |
| Classification | msc 81-00 |
| Classification | msc 82-00 |
| Classification | msc 83-00 |
| Classification | msc 46L05 |

Let $R$ be a ring and let $a \in R$. The principal left (resp. right, 2-sided) ideal of $a$ is the smallest left (resp. right, 2-sided) ideal of $R$ containing the element $a$.

When $R$ is a commutative ring, the principal ideal of $a$ is denoted $(a)$.