

```
1 #include <stdint.h>
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<http://coding.hsnr.de>



```
float Q_rsqrt(float number)
```

```
{
```

```
    long i;
```

```
    float x2, y;
```

```
    const float threehalfs = 1.5F;
```

```
    x2 = number * 0.5F;
```

```
    y = number;
```

```
    i = *(long *)&y;
```

```
    i = 0x5f3759df - (i >> 1);
```

```
    y = *(float *)&i;
```

```
    y = y * (threehalfs - (x2 * y * y)); // 1st iteration
```

```
// y = y * ( threehalfs - ( x2 * y * y ) ); // 2nd iteration, this can be removed
```

```
    return y;
```

```
}
```

Coding@ HSNR

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Campus Mönchengladbach

