

# PHP – Integer Division

PHP has introduced a new function `intdiv()`, which performs integer division of its operands and return the division as `int`.

The `intdiv()` function returns integer quotient of two integer parameters. If "a/b" results in "c" as division and "r" as remainder such that –

```
a=b*c+r
```

In this case, **`intdiv(a,b)`** returns **`r`** –

```
intdiv ( int $x , int $y ) : int
```

The `$x` and `$y` are the numerator and denominator parts of the division expression. The `intdiv()` function returns an integer. The return value is positive if both parameters are positive or both parameters are negative.

## Example 1

If numerator is < denominator, the `intdiv()` function returns "0", as shown below –

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```
<?php
    $x=10;
    $y=3;
    $r=intdiv($x, $y);
    echo "intdiv(" . $x . "," . $y . ") = " . $r . "\n";
    $r=intdiv($y, $x);
    echo "intdiv(" . $y . "," . $x . ") = " . $r;
?>
```

It will produce the following **output** –

```
intdiv(10,3) = 3
intdiv(3,10) = 0
```



## Example 2

In the following example, the `intdiv()` function returns negative integer because either the numerator or denominator is negative.

&lt;/&gt;

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```
<?php
    $x=10;
    $y=-3;
    $r=intdiv($x, $y);
    echo "intdiv(" . $x . "," . $y . ") = " . $r . "\n";
    $x=-10;
    $y=3;
    $r=intdiv($x, $y);
    echo "intdiv(" . $x . "," . $y . ") = " . $r . "\n";
?>
```

It will produce the following **output** –

```
intdiv(10,-3) = -3
intdiv(-10,3) = -3
```

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## Example 3

The `intdiv()` function returns a positive integer in the case of numerator and denominator both being positive or both being negative.

&lt;/&gt;

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```
<?php
    $x=10;
    $y=3;
    $r=intdiv($x, $y);
    echo "intdiv(" . $x . "," . $y . ") = " . $r . "\n";
```



```
$x=-10;  
$y=-3;  
$r=intdiv($x, $y);  
echo "intdiv(" . $x . "," . $y . ") = " . $r ;  
?>
```

It will produce the following **output** –

```
intdiv(10,3) = 3  
intdiv(-10,-3) = 3
```

## Example 4

In the following example, the denominator is "0". It results in **DivisionByZeroError** exception.

&lt;/&gt;

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```
<?php  
$x=10;  
$y=0;  
$r=intdiv($x, $y);  
echo "intdiv(" . $x . "," . $y . ") = " . $r . "\n";  
?>
```

It will produce the following **output** –

```
PHP Fatal error:  Uncaught DivisionByZeroError: Division by zero in hello.php:4
```