

integer division without divide functionality

Division with integers in C, for testing 32 bit max as dividend.

I've found a code in some forum, but it had a bug. Nevertheless, the function implemented in C:

```
int DIV ( int dividend , int divisor ) {  
    int q = 0;  
  
    while (dividend >= divisor) {  
        dividend -= divisor;  
        q++;  
    }  
  
    return q;  
}
```

C

Although, if time is critical and large numbers are plausible, this will be SLOW. A more sophisticated one:

```
tUI32 DIV_tester_UI ( tUI32 dividend, tUI32 divisor )  
{  
    tUI32 q = 0;  
    tUI16 cnt = 0;  
    tUI32 tmp = 0;  
    tUI32 sft = 1;  
    if (divisor != 0 && dividend != 0 && dividend >= divisor )  
    {  
        if (dividend == divisor)  
        {  
            q = 1;  
        }  
    }  
}
```

C

```

else
{
    while ( dividend > divisor )
    {
        tmp = dividend;

        while (tmp > divisor)
        {
            tmp = tmp >> 1;
            sft=sft << 1;
            cnt++;
        }

        if ( tmp != divisor )
        {
            cnt--;
            sft = sft>>1;
        }

        q += sft;
        dividend = dividend - (divisor<<cnt);

        cnt = 0;
        sft = 1;
    }

    if ( dividend == divisor )
    {
        q += 1;
    }

}

return q;
}

```

