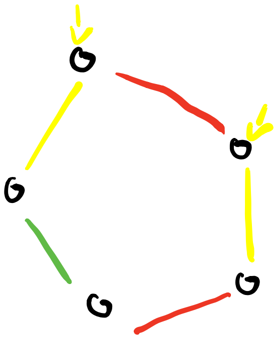

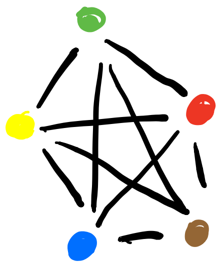

$24 = 2 \cdot 2 \cdot 2 \cdot 3$

$60 = \overset{|}{2} \cdot \overset{|}{2} \cdot \overset{\checkmark}{3} \cdot 5$

$2 \cdot 2 \cdot 3 = 12$

gcd

Sieve of ERATOSTHENES

2 3 4 5 6 7 8 9 10 11 12 13

3 5 7 9 11 13

5 7 11

EUCLID

60^{1} $(5 \cdot 12)$ $60 - 24 = \underline{36}^{2}$ $(3 \cdot 12)$

$\underline{24}^{3}$ $(2 \cdot 12)$

$36 - 24 = 12$ ✓

$24 - 12 = 12$ ✓

$\gcd(m, n) = \gcd(n, m \bmod n)$

$$\begin{aligned}\gcd(24, 60) &= \gcd(60, 24 \bmod 60)\\ &= \gcd(60, 24)\\ &= \gcd(24, 60 \bmod 24)\\ &= \gcd(24, 12)\\ &= \gcd(12, \underset{\uparrow}{0})\end{aligned}$$

Euclid algorithm (input m, n)

```
while $n \neq 0$
    $r \leftarrow m \bmod n$
    $m \leftarrow n$
    $n \leftarrow r$
```