

$$13/a + \textcircled{15} \Rightarrow 13 | \textcircled{10a+5}$$

$$\begin{array}{c} 1 \\ \textcircled{2} \\ \textcircled{15} \\ \textcircled{14} \\ 3 \\ (4) \end{array}$$

$$\textcircled{w} (13)$$

$$0 \cdot 3 = 27 (13) = 1 (13)$$

$$a + 4b (13)$$

$$\frac{a}{1} + b (13)$$

$$10a + b (13)$$

$$f = (2-7g + 3 \cdot 5$$

$$6$$

$$5a + 8b = 1$$

$$\underbrace{\hspace{10em}}$$

$$(11) \begin{matrix} 1 \\ 11 \end{matrix} \times 2$$

$$11 \mid 2a + 2b$$

d1a

d1b

d1 ka + hb

112-22
0

~~11~~

52

6

52

16 =

8

6:4-21

(4)

[2]

$$2 = 6 - 4.1$$

$$4 = 52 - 8.6$$

$$2 = 6 - (52 - 8.6) = -52.1 + 6$$

$$5k + 8h$$

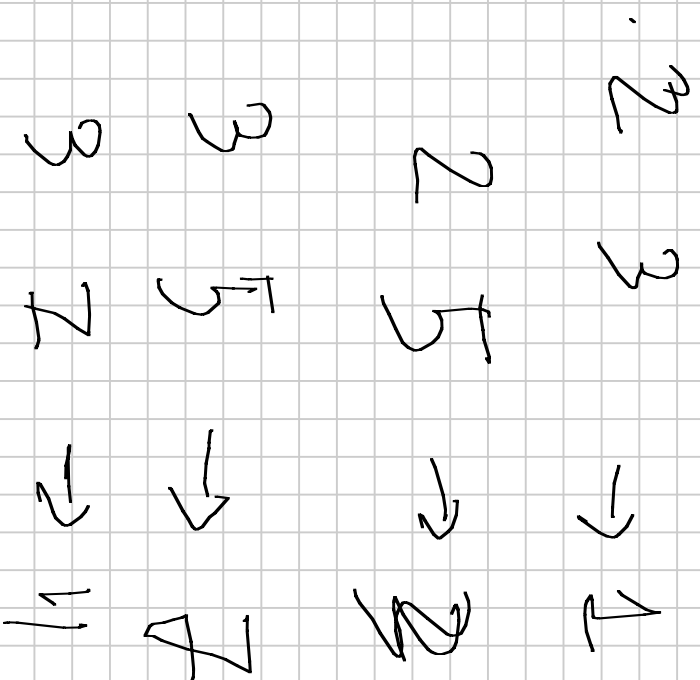
$$k, h \in \mathbb{N}$$

~~① 132~~

33	34	35	36	37
25+8	10+24	35	20+16	32+5

S 11 p1'U ground C oke Nen
 SV C... 120

m.



$$\underbrace{(a-1)(b-1)-1}$$

$$ab-a-b=ka+hb$$

$$k, h \in \mathbb{N}$$

$$-b \equiv hb \pmod{a}$$

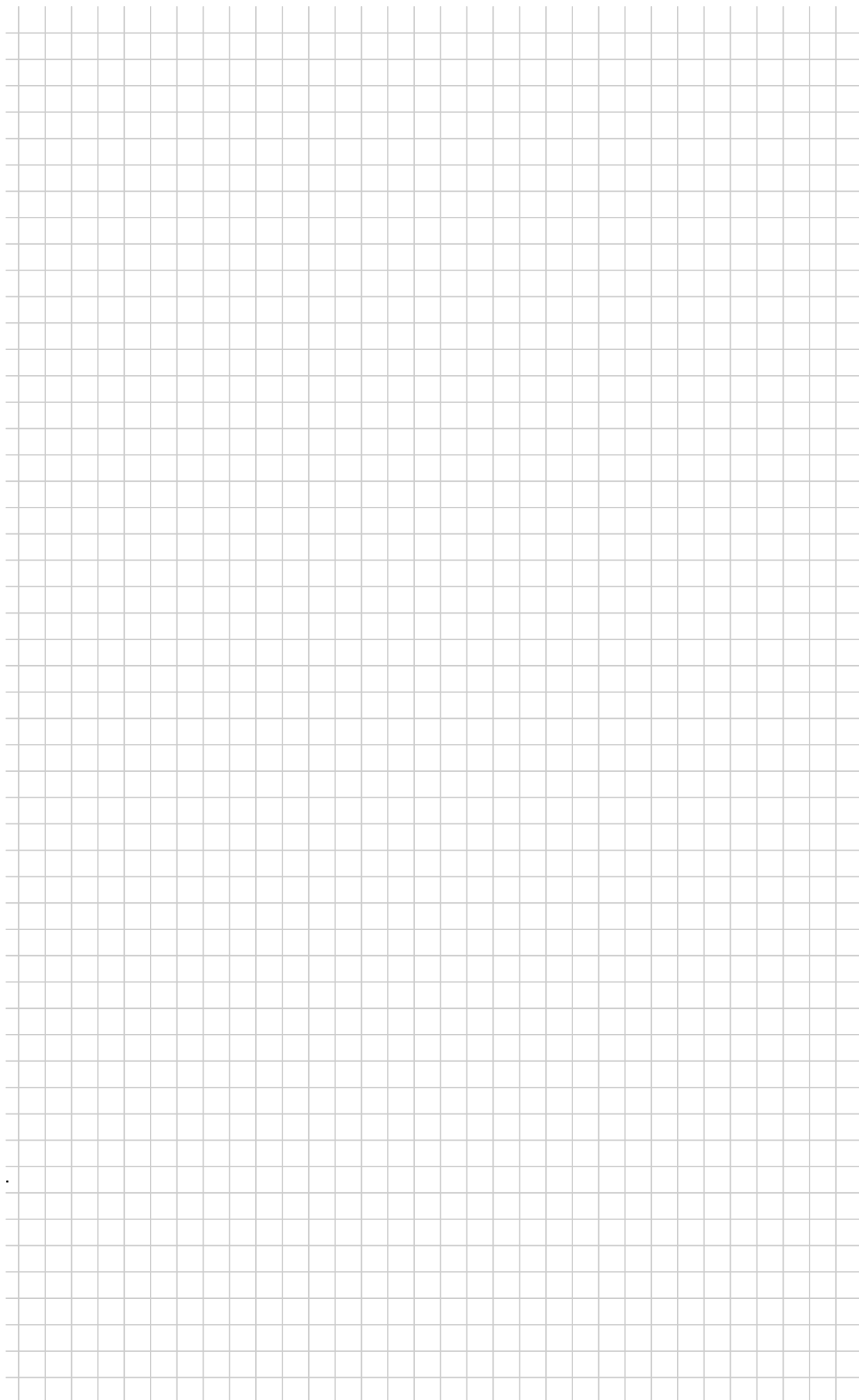
$$(h+1) \equiv 0 \pmod{a}$$

$$(k+1) \equiv 0 \pmod{b}$$

n il più piccolo naturale con
esattamente 12 divisori.

Tutti le soluzioni di.

$$\phi(n) = 12$$



$$p_1^{k_1} \cdot p_2^{k_2} \cdot \dots \cdot p_n^{k_n} = m$$

$$(k_1+1)(k_2+1) \cdot \dots \cdot (k_n+1) = O(m)$$

$$12 = 3 \cdot 4$$

$$2^{11} = 2048$$

$$2^5 \cdot 3 = 96$$

$$2^3 \cdot 3^2 = 72$$

$$\sqrt{22 \cdot 3 \cdot 5} = 66$$

$\phi(n)$ è il numero di numeri coprimi con n

$$\phi(n \cdot m) = \phi(n) \cdot \phi(m)$$

$$\phi(n) = n \cdot \left(1 - \frac{1}{p_1}\right) \cdots \left(1 - \frac{1}{p_k}\right)$$

$$\begin{aligned} \phi(p^k) &= p^k - p^{k-1} \\ &= p^k \left(1 - \frac{1}{p}\right) \\ &= p^{k-1} (p-1) \end{aligned}$$

$$\phi(n) = 12$$

$$n = 13$$

$$n = 26$$

$$\phi(n) = 6 \cdot 2$$

$$\begin{array}{c} \downarrow \\ 7, 14 \\ 9, 18 \end{array} \quad \begin{array}{c} \nearrow \\ 3, 4, 6 \end{array}$$

$$\begin{array}{c} 7 \cdot 3 \quad 7 \cdot 4 \quad 7 \cdot 6 \\ \nwarrow \quad \nearrow \\ 14 \cdot 3 \\ \nwarrow \quad \nearrow \\ 8 \cdot 4 \end{array}$$

$$\phi(n) = 4 \quad (3)$$

$$\phi(n) = 2 \cdot 2 \cdot 2$$

