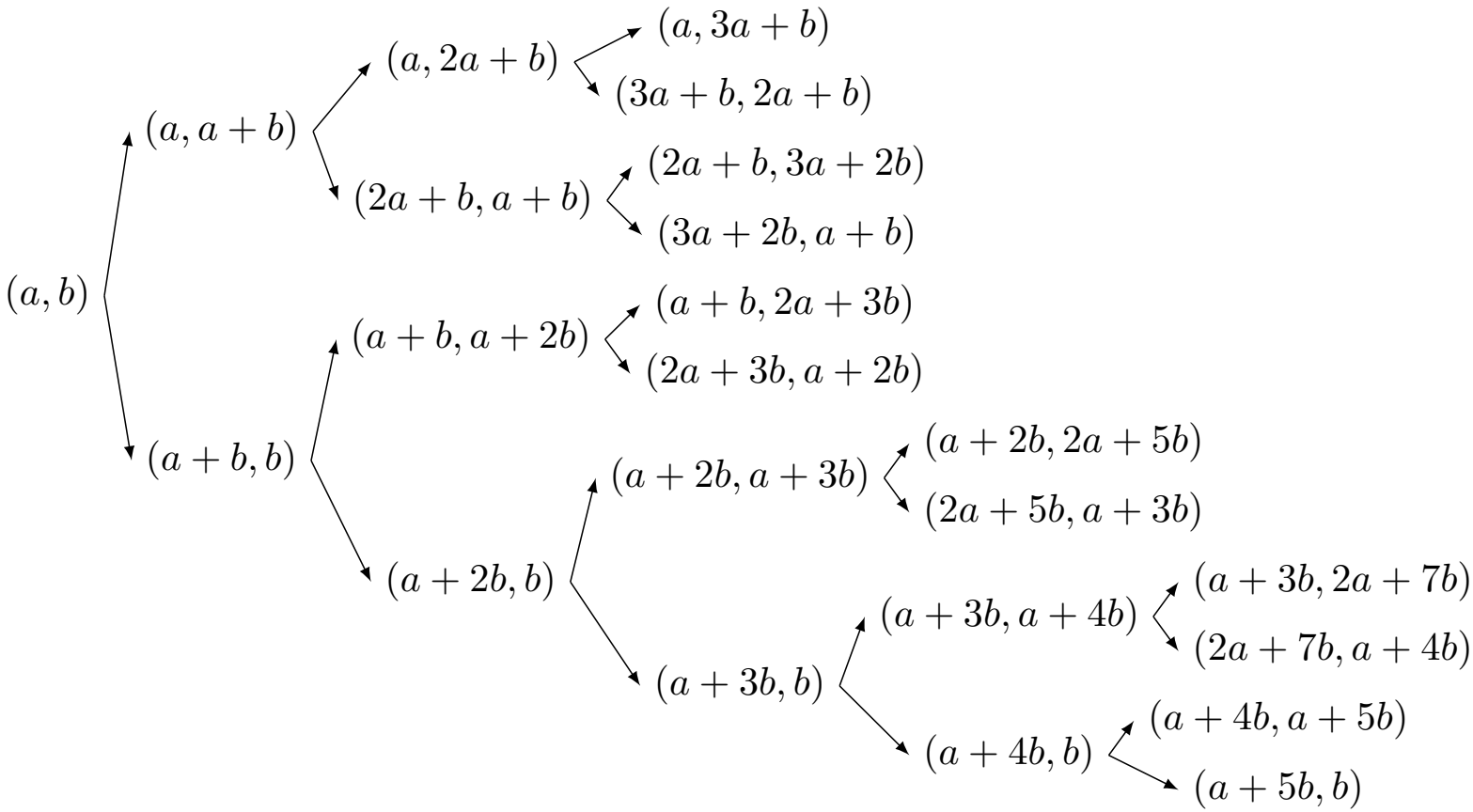
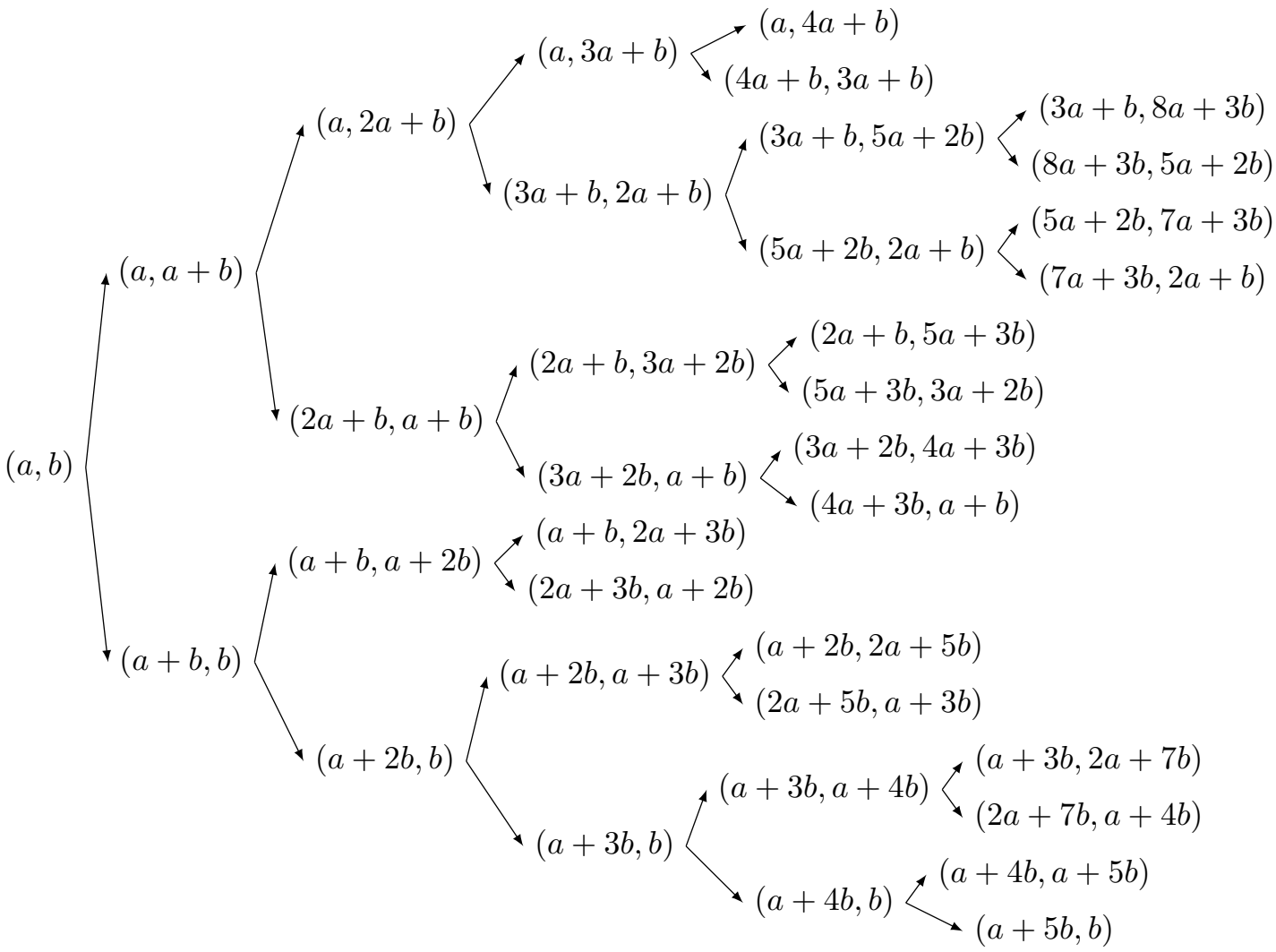
(4) $P = \{p, q, r, s\},\ N_P(a) = p,\ N_P(b) = q,\ N_P(a+b) = r,$
$N_P(a+3b) = s,\ N_P(2a+b) = s,$
(i) $p = 2,\ q, r \neq 3.$



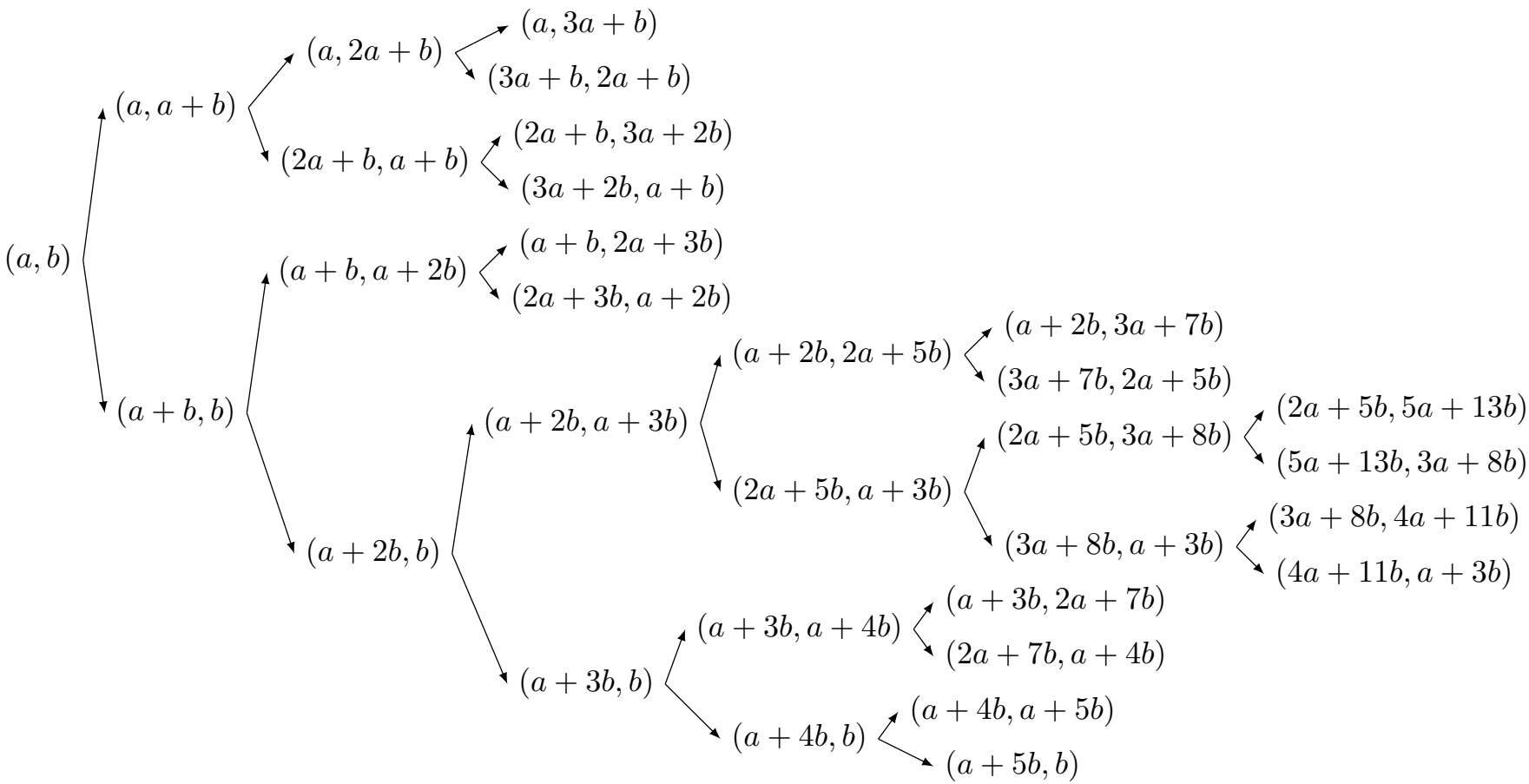
$$\begin{aligned}\mathrm{APT}_P(a,b) = \Big\{&(a,b),\ (a,a+b),\ (a+b,b),\ (a,2a+b)\\ &(2a+b,a+b),\ (a+b,a+2b),\ (a+2b,b),\\ &(a,3a+b),\ (3a+b,2a+b),\ (2a+b,3a+2b),\\ &(3a+2b,a+b),\ (a+b,2a+3b),\ (2a+3b,a+2b),\\ &(a+2b,a+3b),\ (a+3b,b),\ (a+2b,2a+5b),\\ &(2a+5b,a+3b),\ (a+3b,a+4b),\ (a+4b,b),\\ &(a+3b,2a+7b),\ (2a+7b,a+4b),\ (a+4b,a+5b),\\ &(a+5b,b)\Big\}.\end{aligned}$$

(4) $P = \{p, q, r, s\},\ N_P(a) = p,\ N_P(b) = q,\ N_P(a+b) = r,$
$N_P(a+3b) = s,\ N_P(2a+b) = s,$
(ii) $p = 2,\ q = 3.$



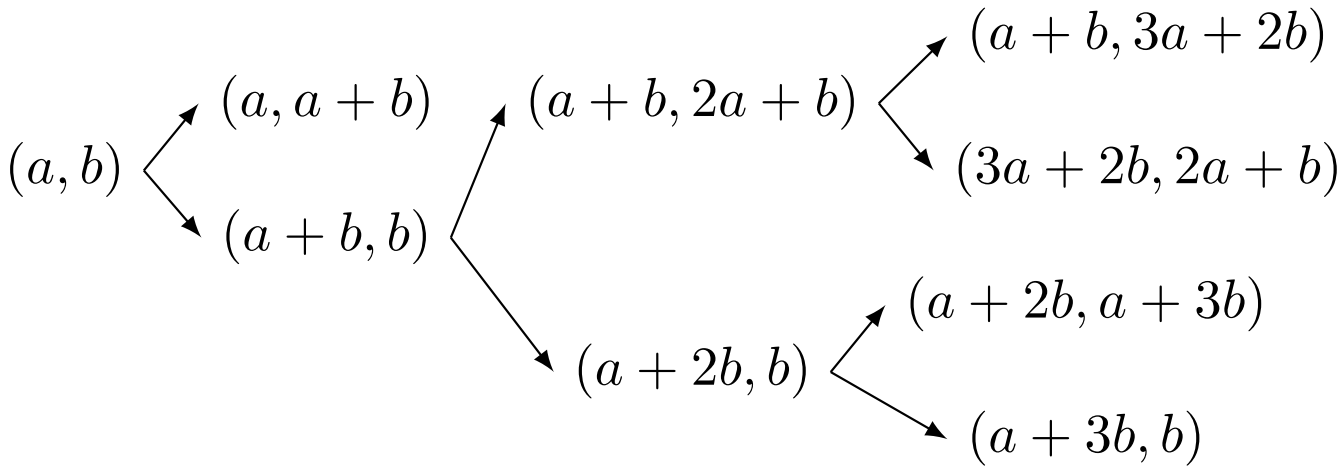
$$\begin{aligned}\mathrm{APT}_P(a,b) = \Big\{ & (a,b),\ (a,a+b),\ (a+b,b),\ (a,2a+b) \\ & (2a+b,a+b),\ (a+b,a+2b),\ (a+2b,b), \\ & (a,3a+b),\ (3a+b,2a+b),\ (2a+b,3a+2b), \\ & (3a+2b,a+b),\ (a+b,2a+3b),\ (2a+3b,a+2b), \\ & (a+2b,a+3b),\ (a+3b,b),\ (a,4a+b), \\ & (4a+b,3a+b),\ (3a+b,5a+2b),\ (5a+2b,2a+b), \\ & (2a+b,5a+3b),\ (5a+3b,3a+2b),\ (3a+2b,4a+3b), \\ & (4a+3b,a+b),\ (a+2b,2a+5b),\ (2a+5b,a+3b), \\ & (a+3b,a+4b),\ (a+4b,b),\ (3a+b,8a+3b), \\ & (8a+3b,5a+2b),\ (5a+2b,7a+3b),\ (7a+3b,2a+b), \\ & (a+3b,2a+7b),\ (2a+7b,a+4b),\ (a+4b,a+5b), \\ & (a+5b,b)\Big\}. \end{aligned}$$

(4) $P = \{p, q, r, s\},\ N_P(a) = p,\ N_P(b) = q,\ N_P(a+b) = r,$
$N_P(a+3b) = s,\ N_P(2a+b) = s,$
(iii) $p = 2,\ r = 3.$



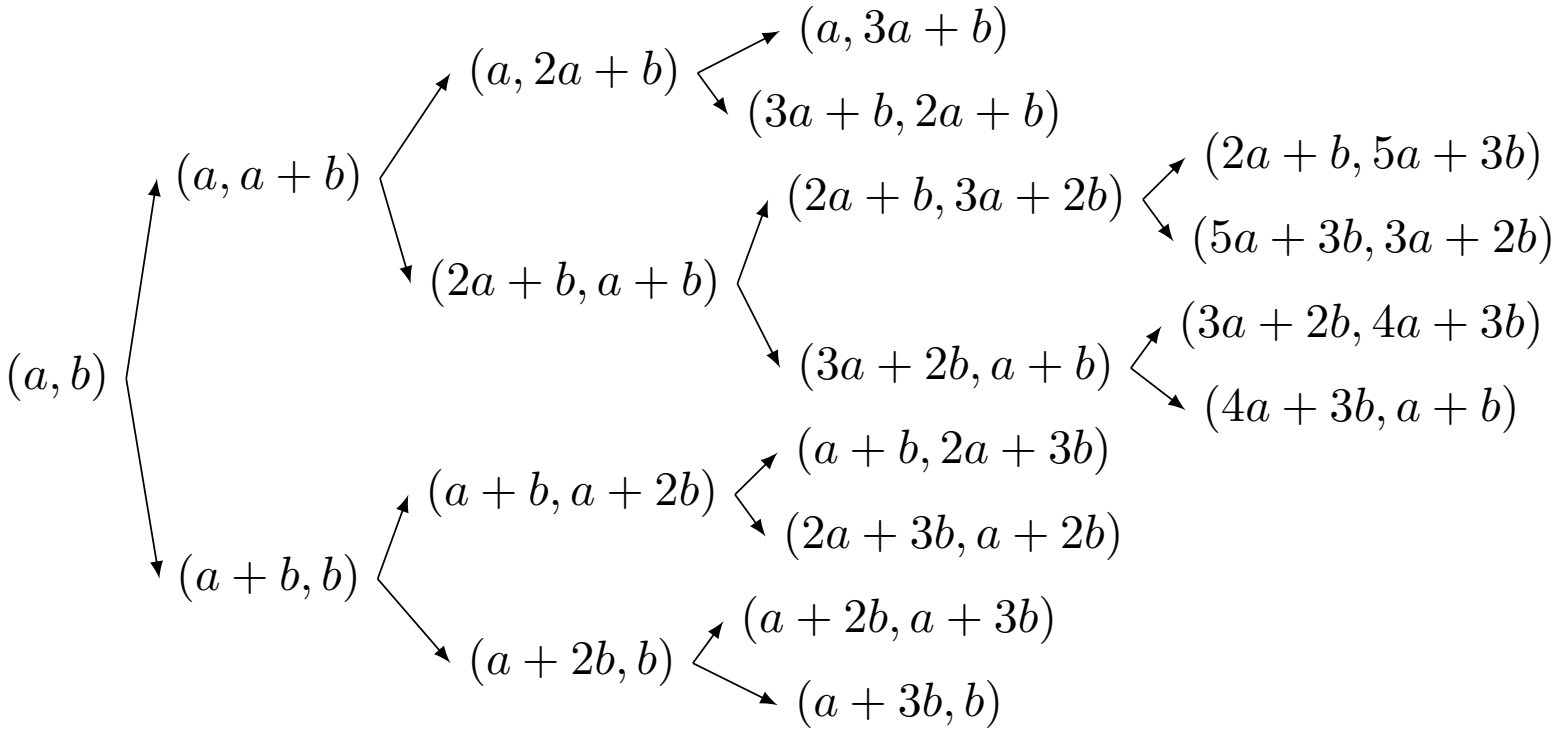
$$\begin{aligned}\mathrm{APT}_P(a,b) = \Big\{ & (a,b),\ (a,a+b),\ (a+b,b),\ (a,2a+b) \\ & (2a+b,a+b),\ (a+b,a+2b),\ (a+2b,b), \\ & (a,3a+b),\ (3a+b,2a+b),\ (2a+b,3a+2b), \\ & (3a+2b,a+b),\ (a+b,2a+3b),\ (2a+3b,a+2b), \\ & (a+2b,a+3b),\ (a+3b,b),\ (a+2b,2a+5b), \\ & (2a+5b,a+3b),\ (a+3b,a+4b),\ (a+4b,b), \\ & (a+2b,3a+7b),\ (3a+7b,2a+5b),\ (2a+5b,3a+8b), \\ & (3a+8b,a+3b),\ (a+3b,2a+7b),\ (2a+7b,a+4b) \\ & (a+4b,a+5b),\ (a+5b,b),\ (2a+5b,5a+13b), \\ & (5a+13b,3a+8b),\ (3a+8b,4a+11b),\ (4a+11b,a+3b) \Big\}.\end{aligned}$$

(5) $P = \{p, q, r, s\},\ N_P(a) = p,\ N_P(b) = q,\ N_P(a+b) = r,$
$N_P(a+2b) = ps,\ N_P(2a+b) = 1.$



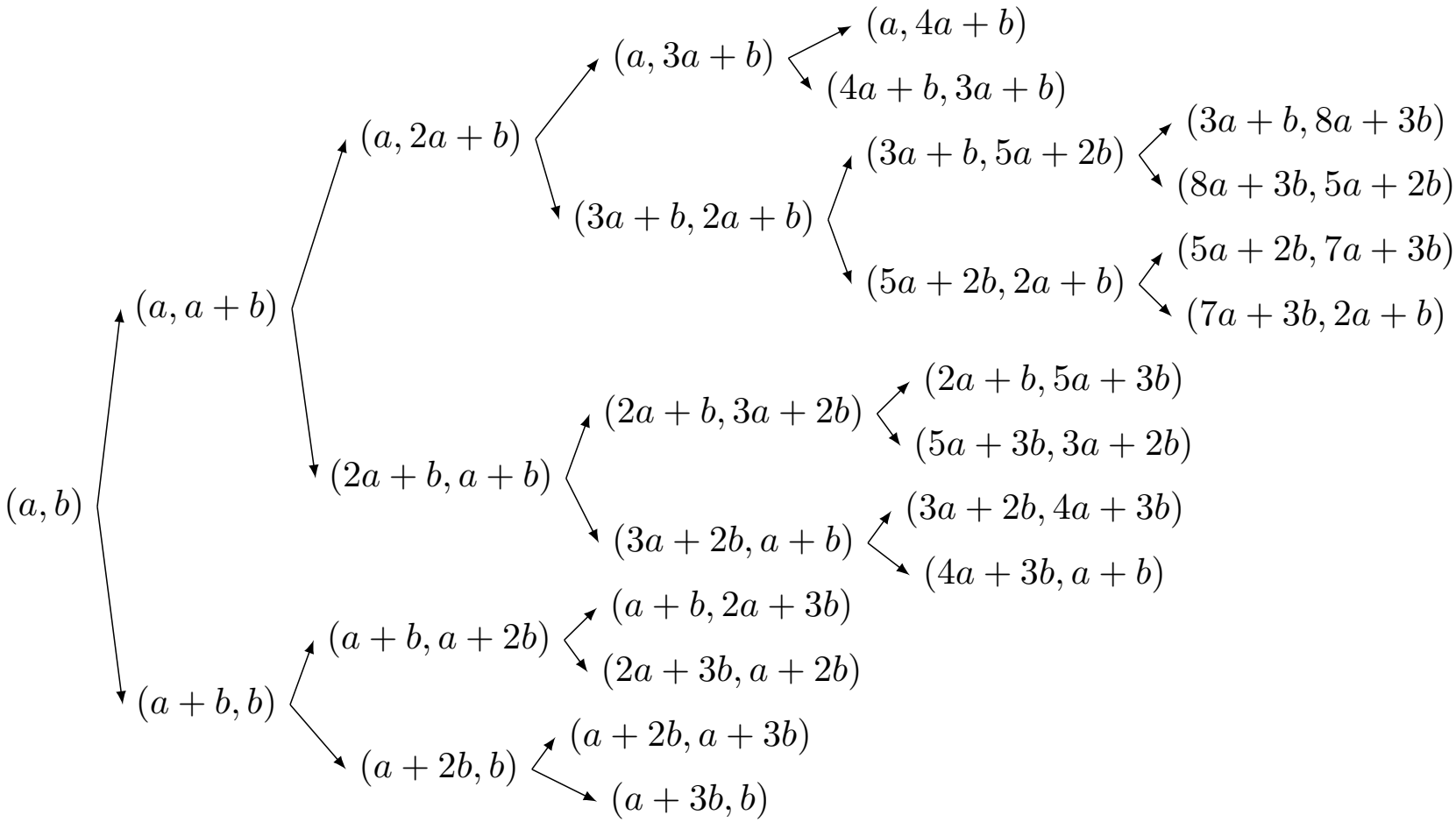
$$\begin{aligned}\mathrm{APT}_P(a,b) = \Big\{ & (a,b),\ (a,a+b),\ (a+b,b), \\ & (a+b,2a+b),\ (a+2b,b),\ (a+b,3a+2b), \\ & (3a+2b,2a+b),\ (a+2b,a+3b),\ (a+3b,b), \Big\}.\end{aligned}$$

(6) $P = \{p, q, r, s\},\ N_P(a) = p,\ N_P(b) = q,\ N_P(a+b) = r,$
$N_P(2a+b) = s,\ N_P(a+3b) = 1,$
(i) $p = 2,\ q \neq 3, 5.$



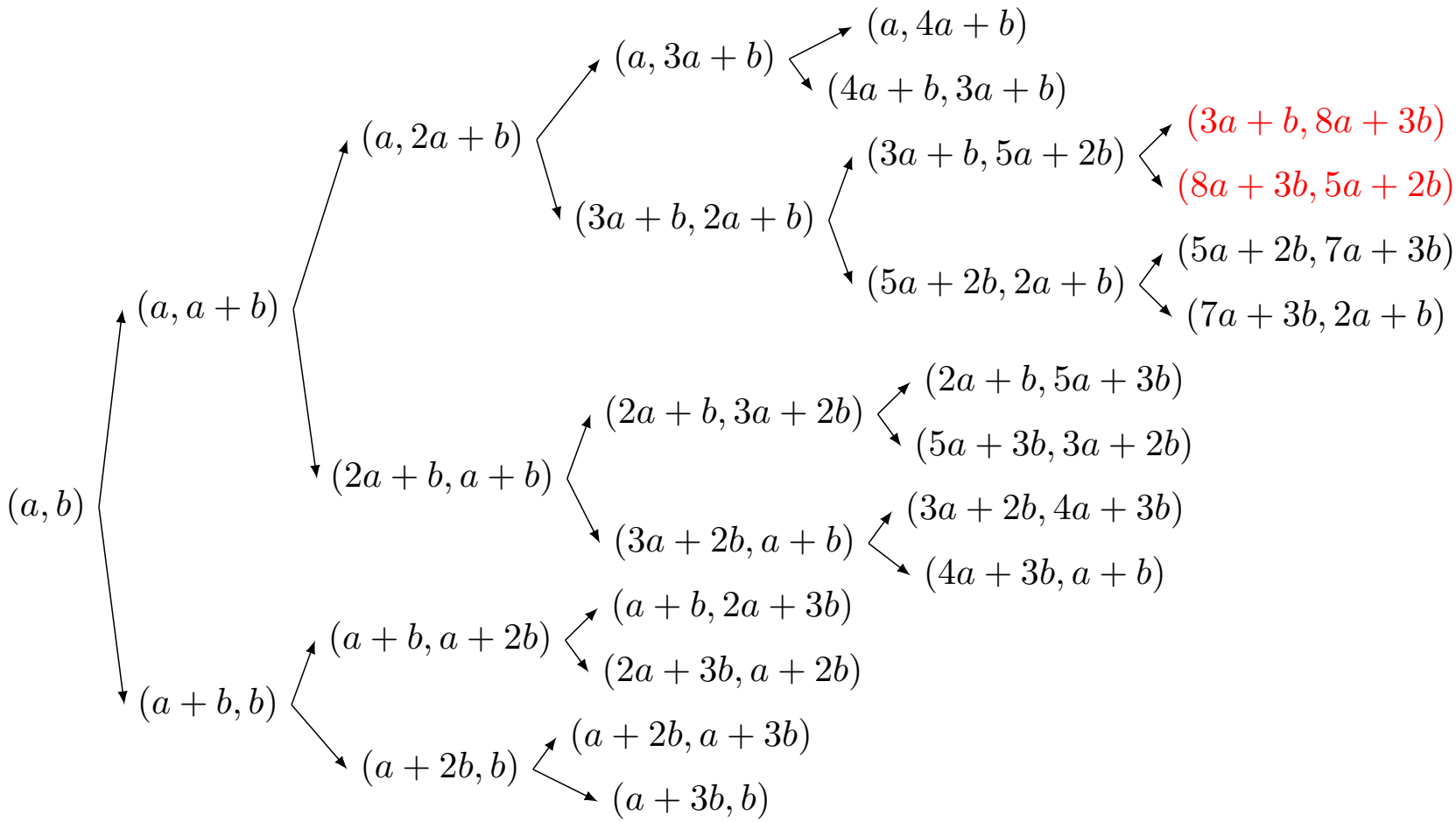
$$\begin{aligned}\mathrm{APT}_P(a,b) = \Big\{ & (a,b),\ (a,a+b),\ (a+b,b),\ (a,2a+b) \\ & (2a+b,a+b),\ (a+b,a+2b),\ (a+2b,b), \\ & (a,3a+b),\ (3a+b,2a+b),\ (2a+b,3a+2b), \\ & (3a+2b,a+b),\ (a+b,2a+3b),\ (2a+3b,a+2b), \\ & (a+2b,a+3b),\ (a+3b,b),\ (2a+b,5a+3b), \\ & (5a+3b,3a+2b),\ (3a+2b,4a+3b),\ (4a+3b,a+b) \Big\}.\end{aligned}$$

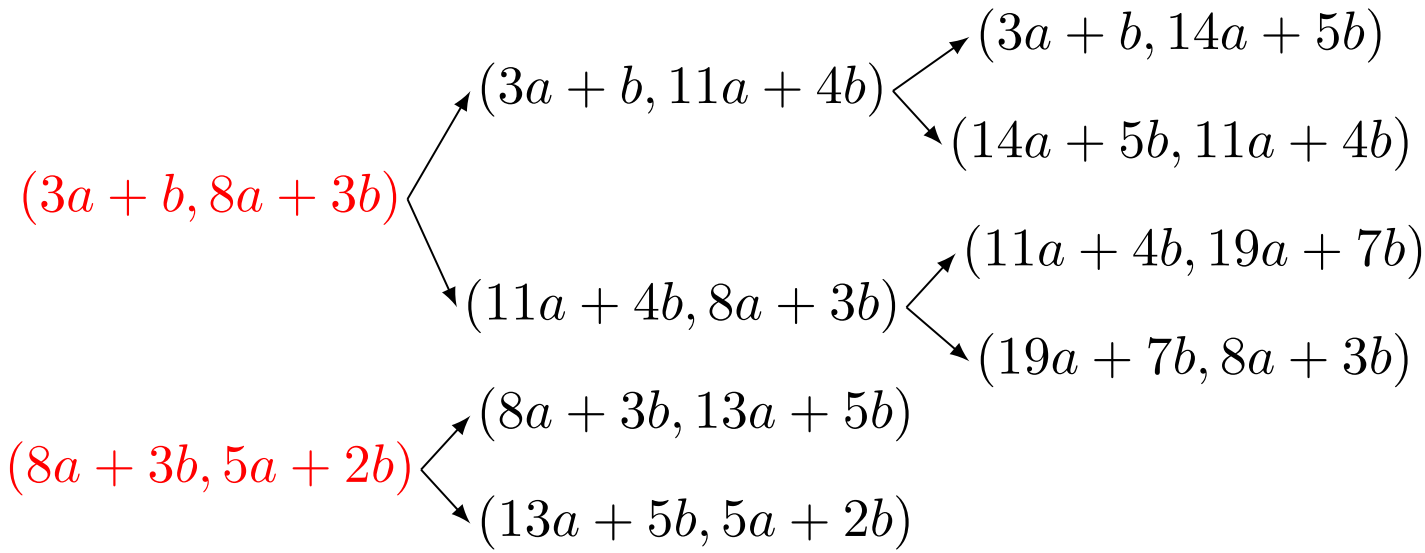
(6) $P = \{p, q, r, s\},\ N_P(a) = p,\ N_P(b) = q,\ N_P(a+b) = r,$
$N_P(2a+b) = s,\ N_P(a+3b) = 1,$
(ii) $p = 2,\ q = 3,\ r \neq 5.$



$$\begin{aligned}\mathrm{APT}_P(a,b) = \Big\{ & (a,b),\ (a,a+b),\ (a+b,b),\ (a,2a+b) \\ & (2a+b,a+b),\ (a+b,a+2b),\ (a+2b,b), \\ & (a,3a+b),\ (3a+b,2a+b),\ (2a+b,3a+2b), \\ & (3a+2b,a+b),\ (a+b,2a+3b),\ (2a+3b,a+2b), \\ & (a+2b,a+3b),\ (a+3b,b),\ (a,4a+b), \\ & (4a+b,3a+b),\ (3a+b,5a+2b),\ (5a+2b,2a+b), \\ & (2a+b,5a+3b),\ (5a+3b,3a+2b),\ (3a+2b,4a+3b), \\ & (4a+3b,a+b),\ (3a+b,8a+3b),\ (8a+3b,5a+2b), \\ & (5a+2b,7a+3b),\ (7a+3b,2a+b) \Big\}.\end{aligned}$$

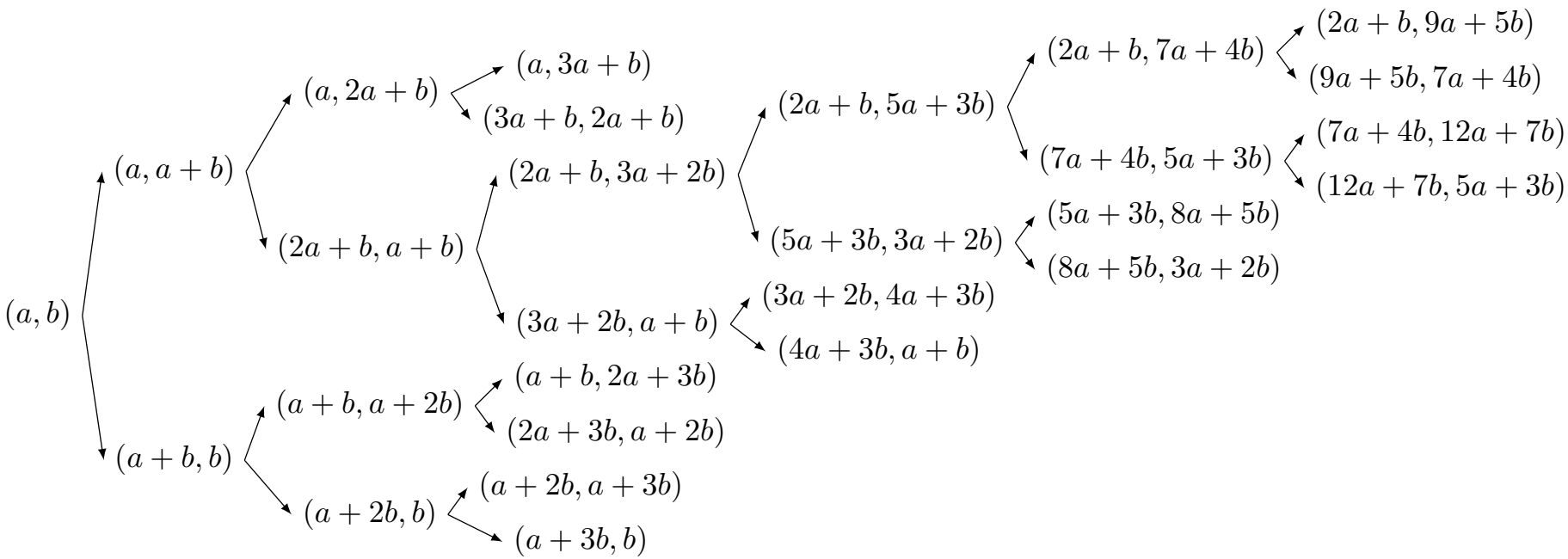
(6) $P = \{p, q, r, s\},\ N_P(a) = p,\ N_P(b) = q,\ N_P(a+b) = r,$
$N_P(2a+b) = s,\ N_P(a+3b) = 1,$
(iii) $p = 2,\ q = 3,\ r = 5.$




$(3a+b, 8a+3b)$
$(3a+b, 11a+4b)$
$(3a+b, 14a+5b)$
$(14a+5b, 11a+4b)$
$(11a+4b, 8a+3b)$
$(11a+4b, 19a+7b)$
$(19a+7b, 8a+3b)$
$(8a+3b, 5a+2b)$
$(8a+3b, 13a+5b)$
$(13a+5b, 5a+2b)$

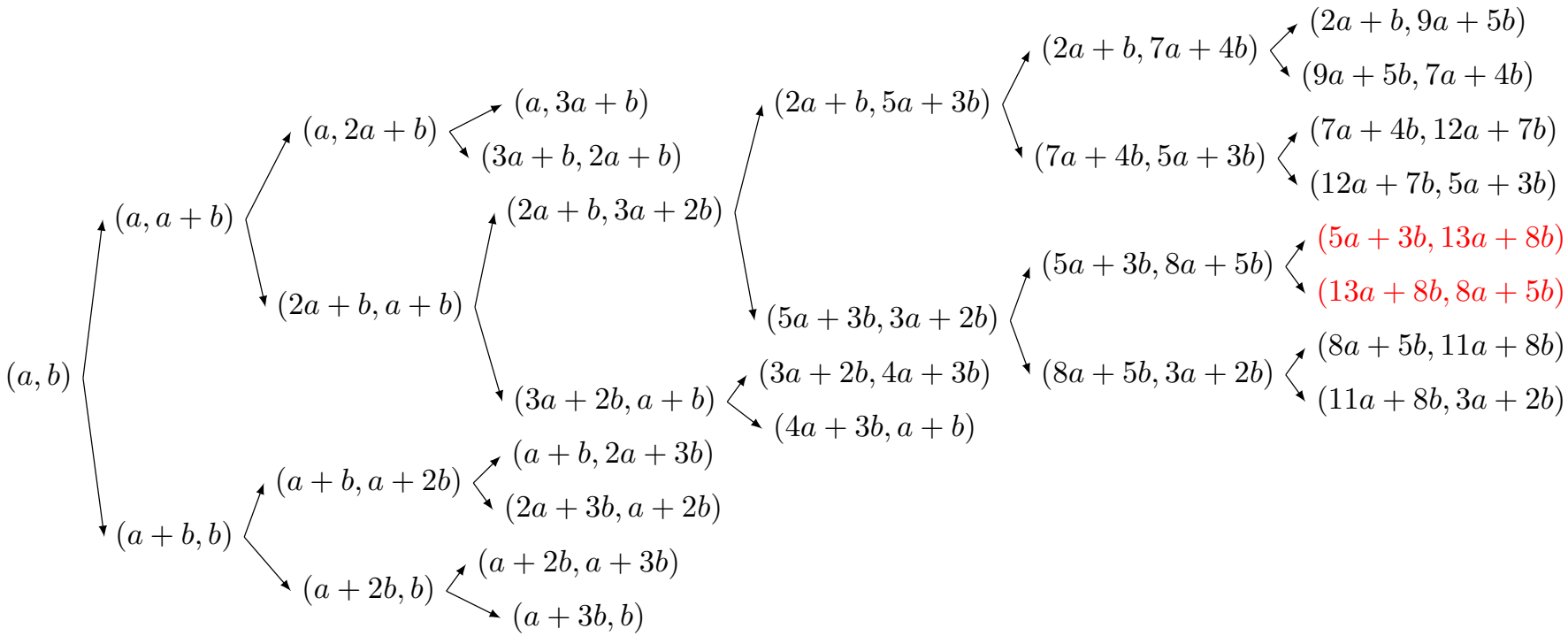
$$\begin{aligned}\mathrm{APT}_P(a,b) = \Big\{ & (a,b),\ (a,a+b),\ (a+b,b),\ (a,2a+b) \\ & (2a+b,a+b),\ (a+b,a+2b),\ (a+2b,b), \\ & (a,3a+b),\ (3a+b,2a+b),\ (2a+b,3a+2b), \\ & (3a+2b,a+b),\ (a+b,2a+3b),\ (2a+3b,a+2b), \\ & (a+2b,a+3b),\ (a+3b,b),\ (a,4a+b), \\ & (4a+b,3a+b),\ (3a+b,5a+2b),\ (5a+2b,2a+b), \\ & (2a+b,5a+3b),\ (5a+3b,3a+2b),\ (3a+2b,4a+3b), \\ & (4a+3b,a+b),\ (3a+b,8a+3b),\ (8a+3b,5a+2b), \\ & (5a+2b,7a+3b),\ (7a+3b,2a+b),\ (3a+b,11a+4b), \\ & (11a+4b,8a+3b),\ (8a+3b,13a+5b),\ (13a+5b,5a+2b), \\ & (3a+b,14a+5b),\ (14a+5b,11a+4b), \\ & (11a+4b,19a+7b),\ (19a+7b,8a+3b) \Big\}.\end{aligned}$$

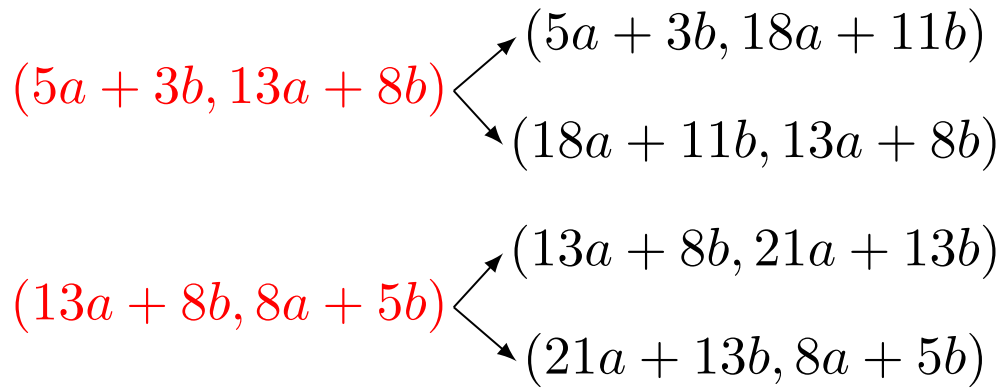
(6) $P = \{p, q, r, s\},\ N_P(a) = p,\ N_P(b) = q,\ N_P(a+b) = r,$
$N_P(2a+b) = s,\ N_P(a+3b) = 1,$
(iv) $p = 2,\ q = 5,\ r \neq 3.$



$$\begin{aligned}\mathrm{APT}_P(a,b) = \Big\{ & (a,b),\ (a,a+b),\ (a+b,b),\ (a,2a+b) \\ & (2a+b,a+b),\ (a+b,a+2b),\ (a+2b,b), \\ & (a,3a+b),\ (3a+b,2a+b),\ (2a+b,3a+2b), \\ & (3a+2b,a+b),\ (a+b,2a+3b),\ (2a+3b,a+2b), \\ & (a+2b,a+3b),\ (a+3b,b),\ (2a+b,5a+3b), \\ & (5a+3b,3a+2b),\ (3a+2b,4a+3b),\ (4a+3b,a+b), \\ & (2a+b,7a+4b),\ (7a+4b,5a+3b),\ (5a+3b,8a+5b), \\ & (8a+5b,3a+2b),\ (2a+b,9a+5b),\ (9a+5b,7a+4b), \\ & (7a+4b,12a+7b),\ (12a+7b,5a+3b)\Big\}.\end{aligned}$$

(6) $P = \{p, q, r, s\},\ N_P(a) = p,\ N_P(b) = q,\ N_P(a+b) = r,$
$N_P(2a+b) = s,\ N_P(a+3b) = 1,$
(v) $p = 2,\ q = 5,\ r = 3.$




$(5a+3b, 13a+8b)$
$(5a+3b, 18a+11b)$
$(18a+11b, 13a+8b)$
$(13a+8b, 8a+5b)$
$(13a+8b, 21a+13b)$
$(21a+13b, 8a+5b)$

$$\begin{aligned}\mathrm{APT}_P(a,b) = \Big\{ & (a,b),\ (a,a+b),\ (a+b,b),\ (a,2a+b) \\ & (2a+b,a+b),\ (a+b,a+2b),\ (a+2b,b), \\ & (a,3a+b),\ (3a+b,2a+b),\ (2a+b,3a+2b), \\ & (3a+2b,a+b),\ (a+b,2a+3b),\ (2a+3b,a+2b), \\ & (a+2b,a+3b),\ (a+3b,b),\ (2a+b,5a+3b), \\ & (5a+3b,3a+2b),\ (3a+2b,4a+3b),\ (4a+3b,a+b), \\ & (2a+b,7a+4b),\ (7a+4b,5a+3b),\ (5a+3b,8a+5b), \\ & (8a+5b,3a+2b),\ (2a+b,9a+5b),\ (9a+5b,7a+4b), \\ & (7a+4b,12a+7b),\ (12a+7b,5a+3b), \\ & (5a+3b,13a+8b),\ (13a+8b,8a+5b), \\ & (8a+5b,11a+8b),\ (11a+8b,3a+2b), \\ & (5a+3b,18a+11b),\ (18a+11b,13a+8b), \\ & (13a+8b,21a+13b),\ (21a+13b,8a+5b) \Big\}. \end{aligned}$$