$$q = \frac{v}{1 - w}$$

$$\frac{1}{q'} = \frac{1}{q} + 1$$

Generation	AA	Aa	aa
0	и0	$2v_0$	w_0
1	U 1	$2v_1$	w_1
2	u_2	$2v_2$	w_2
•	•	•	•
n – 1	Un-1	$2v_{n-1}$	w_{n-1}
n	u_n	$2v_n$	$w_{\rm n}$

$$q = \frac{v}{1 - w}$$

$$\frac{1}{a'} = \frac{1}{a} + 1$$

Generation	AA	Aa	aa
0	uo	$2v_0$	w_0
1	U 1	$2v_1$	w_1
2	u_2	$2v_2$	w_2
•		•	•
n – 1	Un-1	$2v_{n-1}$	₩n-1
n	u_n	$2v_n$	w_n

$$\frac{1}{q_n} = \frac{1}{q_{n-1}} + 1$$

$$q = \frac{v}{1 - w}$$

$$\frac{1}{a'} = \frac{1}{a} + 1$$

Generation	AA	Aa	aa
0	и0	$2v_0$	w_0
1	U 1	$2v_1$	w_1
2	\mathfrak{u}_2	$2v_2$	w_2
•			•
n – 1	Un-1	$2v_{n-1}$	₩n-1
n	u_n	$2v_n$	$w_{\rm n}$

$$\frac{1}{q_n} = \frac{1}{q_{n-1}} + 1$$

$$= \frac{1}{q_{n-2}} + 1 + 1$$

$$q = \frac{v}{1 - w}$$

$$\frac{1}{a'} = \frac{1}{a} + 1$$

Generation	AA	Aa	aa
O	и0	$2v_0$	w_0
1	U 1	$2v_1$	w_1
2	\mathfrak{u}_2	$2v_2$	w_2
•		•	•
n – 1	Un-1	$2v_{n-1}$	w_{n-1}
n	u_n	$2v_n$	$w_{\rm n}$

$$\frac{1}{q_n} = \frac{1}{q_{n-1}} + 1$$

$$= \frac{1}{q_{n-2}} + 1 + 1$$

$$= \frac{1}{q_{n-2}} + 1 + 1$$

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$$q = \frac{v}{1 - w}$$

$$\frac{1}{a'} = \frac{1}{a} + 1$$

Generation	AA	Aa	aa
0	и0	$2v_0$	Wo
1	U 1	$2v_1$	w_1
2	\mathfrak{u}_2	$2v_2$	w_2
•		:	•
n – 1	Un-1	$2v_{n-1}$	₩n-1
n	u_n	$2v_n$	w_n

$$\frac{1}{q_n} = \frac{1}{q_{n-1}} + 1$$

$$= \frac{1}{q_{n-2}} + 1 + 1$$

$$= \frac{1}{q_{n-3}} + 1 + 1 + 1$$

$$= \cdots$$

$$q = \frac{v}{1 - w}$$

$$\frac{1}{a'} = \frac{1}{a} + 1$$

Generation	AA	Aa	aa
O	uo	$2v_0$	w_0
1	U 1	$2v_1$	w_1
2	\mathfrak{u}_2	$2v_2$	w_2
•	•	•	•
n – 1	u_{n-1}	$2v_{n-1}$	₩n-1
n	u_n	$2v_n$	$w_{\rm n}$

$$\frac{1}{q_n} = \frac{1}{q_{n-1}} + 1$$

$$= \frac{1}{q_{n-2}} + 1 + 1$$

$$= \frac{1}{q_{n-3}} + 1 + 1 + 1$$

$$= \cdots$$

$$= \frac{1}{q_0} + \underbrace{1 + 1 + \cdots + 1}_{n \text{ terms}} = \frac{1}{q_0} + n$$

$$q = \frac{v}{1 - w}$$

$$\frac{1}{q'} = \frac{1}{q} + 1$$

Generation	AA	Aa	aa
0	и0	$2v_0$	w_0
1	U 1	$2v_1$	w_1
2	u_2	$2v_2$	w ₂
•	:	•	•
n – 1	u_{n-1}	$2v_{n-1}$	₩n-1
n	u_n	$2v_n$	w_n

$$\frac{1}{q_n} = \frac{1}{q_{n-1}} + 1$$

$$= \frac{1}{q_{n-2}} + 1 + 1$$

$$= \frac{1}{q_{n-3}} + 1 + 1 + 1$$

$$= \cdots$$

$$= \frac{1}{q_0} + \underbrace{1 + 1 + \cdots + 1}_{n \text{ terms}} = \frac{1}{q_0} + n \quad -\text{ or equivalently } -\text{ or e$$

$$q = \frac{v}{1 - w}$$

$$\frac{1}{a'} = \frac{1}{a} + 1$$

Generation	AA	Aa	aa
O	и0	$2v_0$	w_0
1	U 1	$2v_1$	w_1
2	\mathfrak{u}_2	$2v_2$	w_2
•		•	•
n – 1	Un-1	$2v_{n-1}$	w_{n-1}
n	u_n	$2v_n$	$w_{\rm n}$

$$\frac{1}{q_n} = \frac{1}{q_{n-1}} + 1$$

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0	uo	$2v_0$	w_0
1	u_1	$2v_1$	w_1
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n – 1	Un-1	$2v_{n-1}$	₩n-1
n	u_n	$2v_n$	w_n

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$$= \frac{1}{q_0} + \underbrace{1 + 1 + \cdots + 1}_{n \text{ terms}} = \frac{1}{q_0} + n \quad -\text{ or equivalently} - \quad q_n = \frac{1}{q_0^{-1} + n}$$

If $q_0 = 0.1$ then, after n = 90 generations, $q_{90} = 0.01$.

Slogan

We may expect the lethal gene to die out, eventually, but the rate of decay is painfully slow.

$$q_n = \frac{1}{q_0^{-1} + n}$$