

12 m										
10 m										
8m										
6m										
4m										
2m										
	1 minute	2 minutes	3 minutes	4 minutes	5 minutes	6 minutes	7 minutes	8 minutes	9 minutes	10 minutes

2. Cat and dog were good friends and wanted to play together. They lived 4700m apart. Dog ran faster 250 m per minute and cat 200 m per minute. Cat ran out 10 minutes sooner than dog. Where will they meet?

Solution

Cat		Dog		Distance done by cat and dog together (m)
Time (minutes)	Position (m)	Time (minutes)	Position (m)	
0	0	0	0	0
1	200	1	0	200
3	600	3	0	600
5	1000	5	0	1000
8	1600	8	0	1600
10	2000	10	0	2000
11	2200	11	250	2450
12	2400	12	500	2900
13	2600	13	750	3350
14	2800	14	1000	3800
15	3000	15	1250	4250
16	3200	16	1500	4700
n minutes		(n-10) minutes		

$$250(n - 1) + 200n = 4700$$

$n = 16 \text{ minutes}$

Word game:

Variable with unit $\text{m}\cdot\text{s}^{-1}$, the rate at which an object changes its location (speed).

Variable measures with watch (time).

Graphical expression of relation between 2 variables (graph).

Point in space or a point on a plane or just a point on a line (position).

Physical quantity equal to the length of the shortest path between the final and the initial points (displacement).

Path taken to move from one position to another (distance).

Change of speed in time interval (acceleration)

B	R	A	F	G	O	U	I	P	E	S	T	P
R	I	V	A	L	R	Y	S	T	O	P	S	O
A	V	A	L	A	N	C	H	E	B	U	T	S
V	I	T	A	L	I	T	Y	H	E	R	O	I
A	C	C	E	L	E	R	A	T	I	O	N	T
T	D	I	S	T	A	N	C	E	K	L	O	I
I	I	S	Y	M	I	S	T	A	G	E	B	O
N	G	P	M	T	I	M	E	M	R	S	L	N
Y	N	E	P	R	I	V	T	A	A	R	G	U
A	I	E	A	K	L	E	O	N	P	O	U	R
N	T	D	I	G	N	I	T	I	H	O	N	T
D	I	S	P	L	A	C	E	M	E	N	T	O

Solution

												P
												O
												S
												I
A	C	C	E	L	E	R	A	T	I	O	N	T
	D	I	S	T	A	N	C	E				I
		S							G			O
		P		T	I	M	E		R			N
		E							A			
		E							P			
		D							H			
D	I	S	P	L	A	C	E	M	E	N	T	