



How much have you grown today?

How much do we grow each Year? Month? Day? Minute?

Let's use the *CensusAtSchool* data to help us find out.

School Year	3	4	5	6	7	8	9	10	11
Mean Height(cm)	130.13	136	140.87	147.36	154.05	159.30	164.19	167.24	170.31

From Year 3 to Year 4 there is an increase of $136 - 130.13 = 5.87\text{cm}$

So growth is: 5.87 cm per year;
 0.49 cm per month
 0.0161 cm per day
 0.00001117 cm or 1.116×10^{-5} cm per minute

TASK A

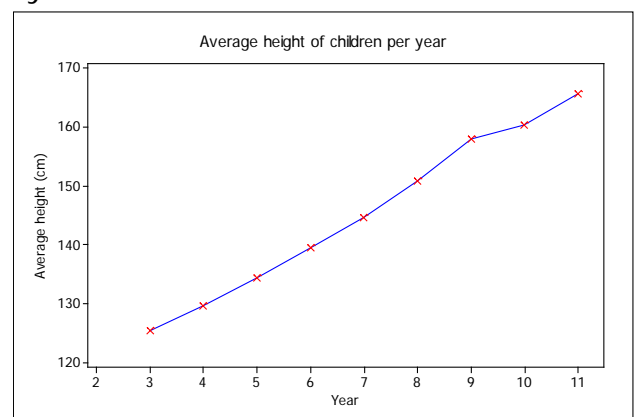
1. Work out these rates for other years.

Year	Growth per Year (cm)	Growth per Month (cm)	Growth per Day (cm)	Growth per Minute (cm)
3				
4				
5				
6				
7				
8				
9				
10				
11				

2. Are they all roughly the same? If not, why not?

3. Draw some graphs of age against height. Try allLine graph with the data given in the table above to give you a rough idea.

4. To be more accurate and to investigate more into growth use the individual data given in the Growth Datasheet on the *CensusAtSchool* website www.CensusAtSchool.org.uk (or use the information on the attached data sheet).



5. Can you think of other factors apart from age which will affect growth? How could you go about investigating them?



How much have you grown today?

Year	Height (cm)	Date of Birth	Year	Height(cm)	Date of Birth	Year	Height(cm)	Date of Birth
8	170	06-Nov-86	3	126	18-Jun-92	4	122	12-Jun-91
8	160	26-Nov-86	3	125	02-Jan-92	4	138	25-Nov-90
8	155	02-Jan-87	3	123	29-Aug-92	4	135	20-Apr-91
9	160	27-Jun-86	5	134	10-Jul-90	5	155	02-Jan-90
9	162	31-Dec-85	4	105	20-Sep-90	5	136	12-Feb-90
9	163	09-Oct-85	3	125	26-Feb-92	5	148	08-Mar-90
9	175	05-Dec-85	6	142	19-Jul-89	5	136	26-Aug-90
9	160	17-Aug-86	4	129	31-Mar-91	11	162	11-Feb-84
9	170	06-Aug-86	4	125	18-Jul-91	11	160	11-Aug-84
10	184	03-Oct-84	3	135	04-Mar-92	9	160	16-Apr-86
10	180	10-Nov-84	3	140	15-Jan-92	9	175	17-May-86
10	183	22-Oct-84	3	135	20-Apr-92	9	173	04-Mar-86
11	167	01-Jul-84	3	122	10-Mar-92	9	172	08-Apr-86
11	187	06-Sep-83	3	133	03-Sep-91	9	170	27-Feb-86
11	185	25-Sep-83	3	130	30-Aug-92	9	170	18-Aug-86
8	164	02-Jun-87	10	171	27-Jan-85	9	156	14-Apr-86
8	172	07-Nov-86	10	184	19-Sep-84	9	169	12-Jul-86
8	172	19-Mar-87	10	163	09-Jul-85	9	178	03-Dec-85
8	173	22-Apr-87	10	179	25-Feb-85	9	168	08-Jun-86
8	161	11-Mar-87	10	198	25-Jan-85	9	162	21-May-86
8	159	08-Oct-86	10	176	28-Oct-84	9	180	27-Sep-85
8	177	16-Oct-86	6	140	16-Dec-88	7	158	05-Dec-87
8	161	14-Mar-87	5	131	14-Sep-89	7	152	05-Apr-88
8	160	15-Jan-87	5	141	28-Jun-90	8	165	24-Oct-86
7	137	15-Jun-88	5	130	06-Apr-90	8	170	23-Oct-86
7	142	05-Aug-88	5	140	19-Feb-90	8	170	02-Mar-87
7	139	20-Apr-88	5	137	10-Sep-89	10	173	07-Feb-85
7	145	15-May-88	5	135	21-Sep-89	10	179	26-Jul-85
7	146	18-Aug-88	5	141	04-Apr-90	10	157	24-Mar-85
7	155	01-Jul-87	5	144	10-Jan-90	10	166	02-Apr-85
11	180	02-Sep-84	6	153	05-Jun-89	6	146	03-Jul-89
11	175	21-Sep-83	6	144	10-Mar-89	6	140	03-Apr-89
7	145	06-Aug-88	6	149	19-Mar-89	6	140	15-Feb-89
7	150	15-Apr-88	6	160	20-Mar-89	6	145	07-Jan-89
7	147	18-Aug-88	6	146	27-Nov-88	6	150	18-Jan-89
7	160	24-May-88	6	145	05-Jun-89	4	127	19-May-91
7	152	01-Mar-88	6	140	25-Dec-88	4	130	07-Jan-91
4	138	15-Dec-90	4	134	13-May-91	4	134	14-Jun-91
4	131	20-Nov-90	5	136	27-Jul-90	4	133	07-Apr-91
6	129	18-Aug-89	6	146	11-Jun-89	7	154	04-Jun-88