

Method of moving Averages :

method of moving averages is a very simple and flexible method of measuring trend. It consists in obtaining a series of moving averages, of successive overlapping groups or sections of the time series.

moving average is a technique to get overall idea of the trend in a data set.

we have the following two methods

- 1) moving average for three years.
- 2) moving average for five years.

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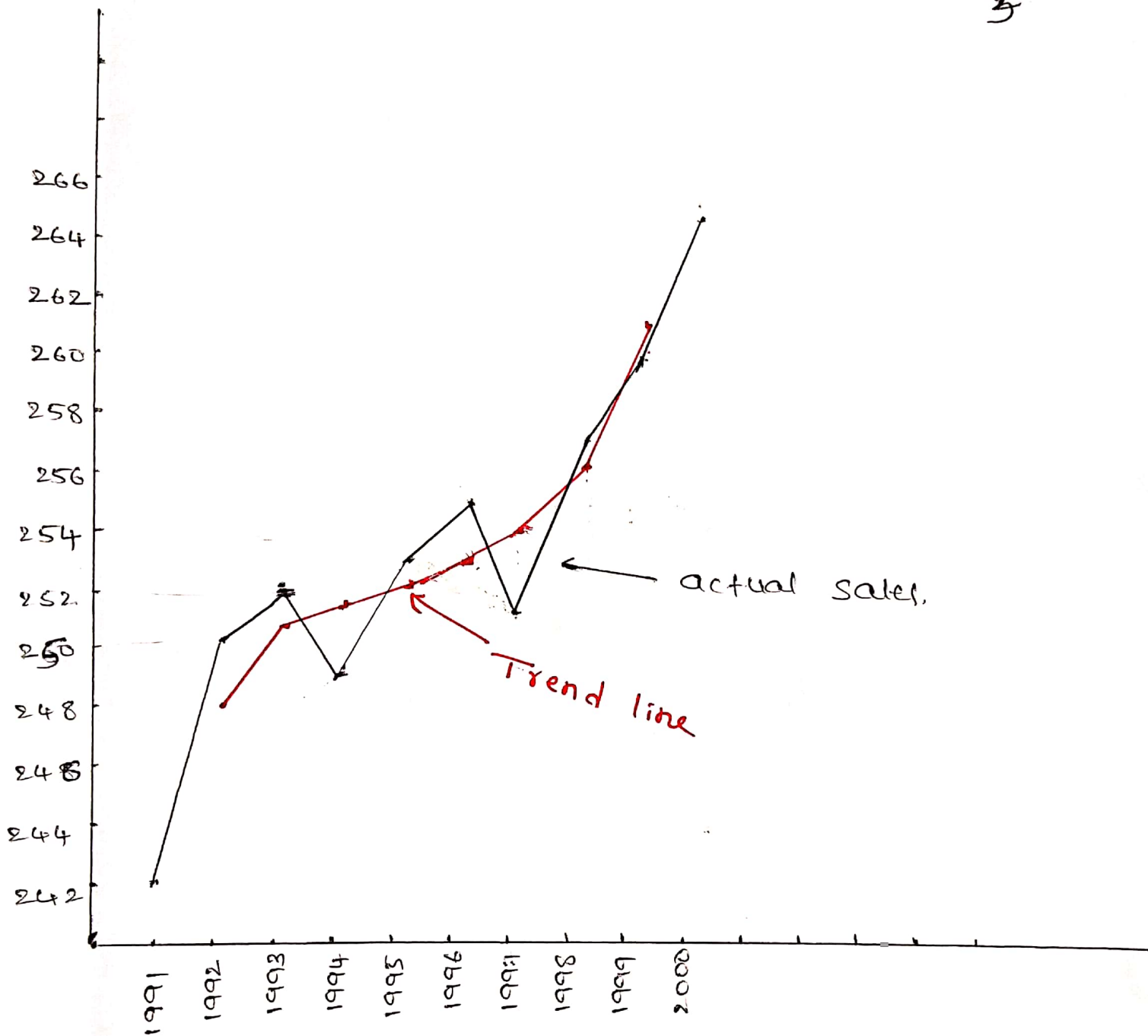
Ex) 1) Calculate three yearly moving averages for the following data.

Year	1991	1992	1993	1994	1995	1996	1997	1998	1999	2000
Sales (1000 Rs)	242	250	252	249	253	255	251	257	260	265

Solution:

For the given data let us compute the trend values by using moving average of period 3 years.

Year	Sales (1000 Rs)	3-yearly moving Average totals.	3 yearly moving averages Trend Values.
1991	242	-	-
1992	250	744	248
1993	252	751	250.3
1994	249	754	251.3
1995	253	757	252.3
1996	255	759	253
1997	251	763	254.3
1998	257	768	256
1999	260	782	260.7
2000	265	-	-



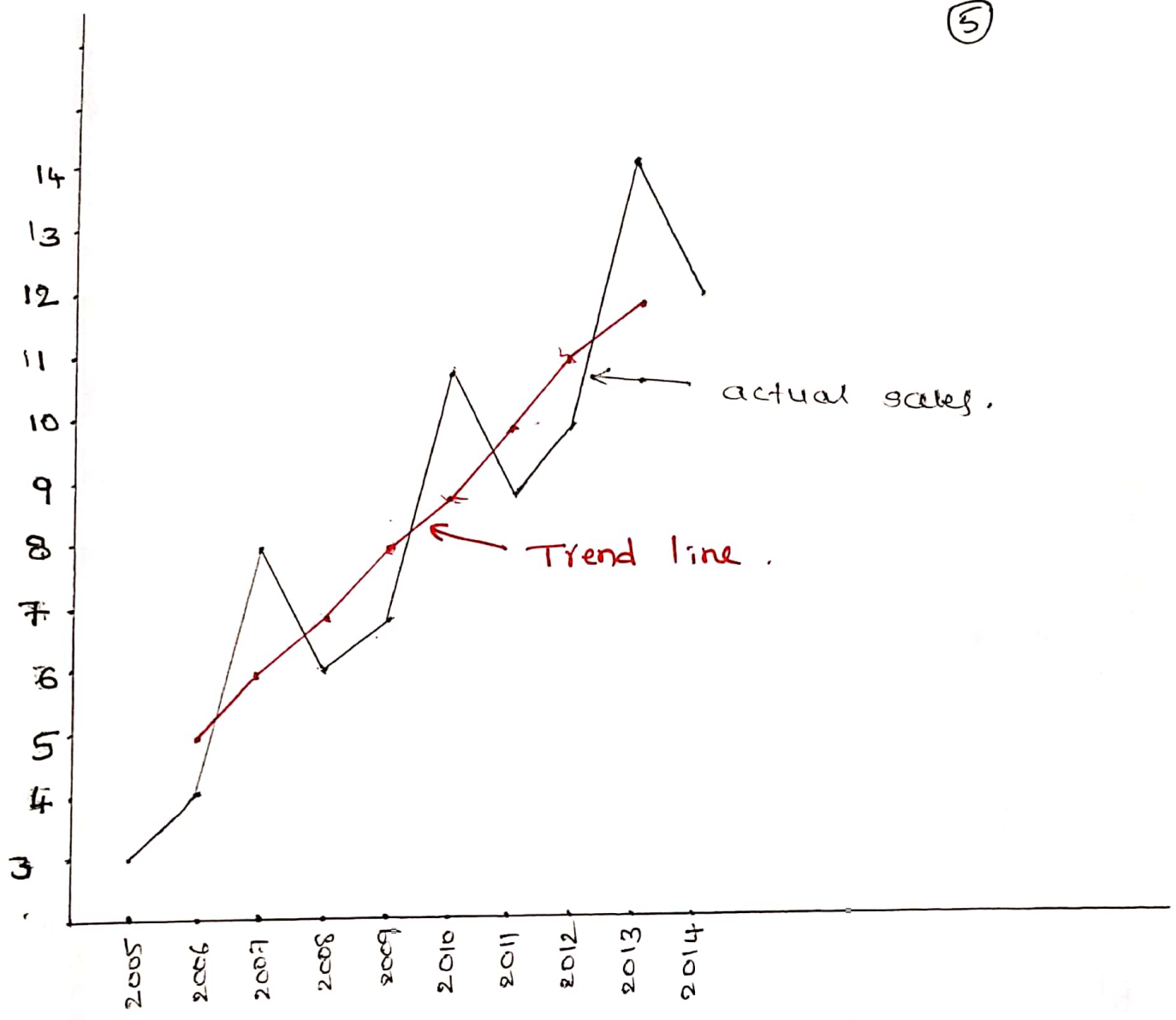
Ex 2) The following table gives the annual sales in millions Rs

Year :	2005	2006	2007	2008	2009	2010	2011	2012	2013	2014
Sales :	3	4	8	6	7	11	9	10	14	12

determine the trend by 3 yearly moving average method.

Year	Sales	3 yearly moving average totals	3 Yearly moving Average Trend values.
2005	3	—	—
2006	4	15	5
2007	8	18	6
2008	6	21	7
2009	7	24	8
2010	11	27	9
2011	9	30	10
2012	10	33	11
2013	14	36	12
2014	12	—	—

5



(6)

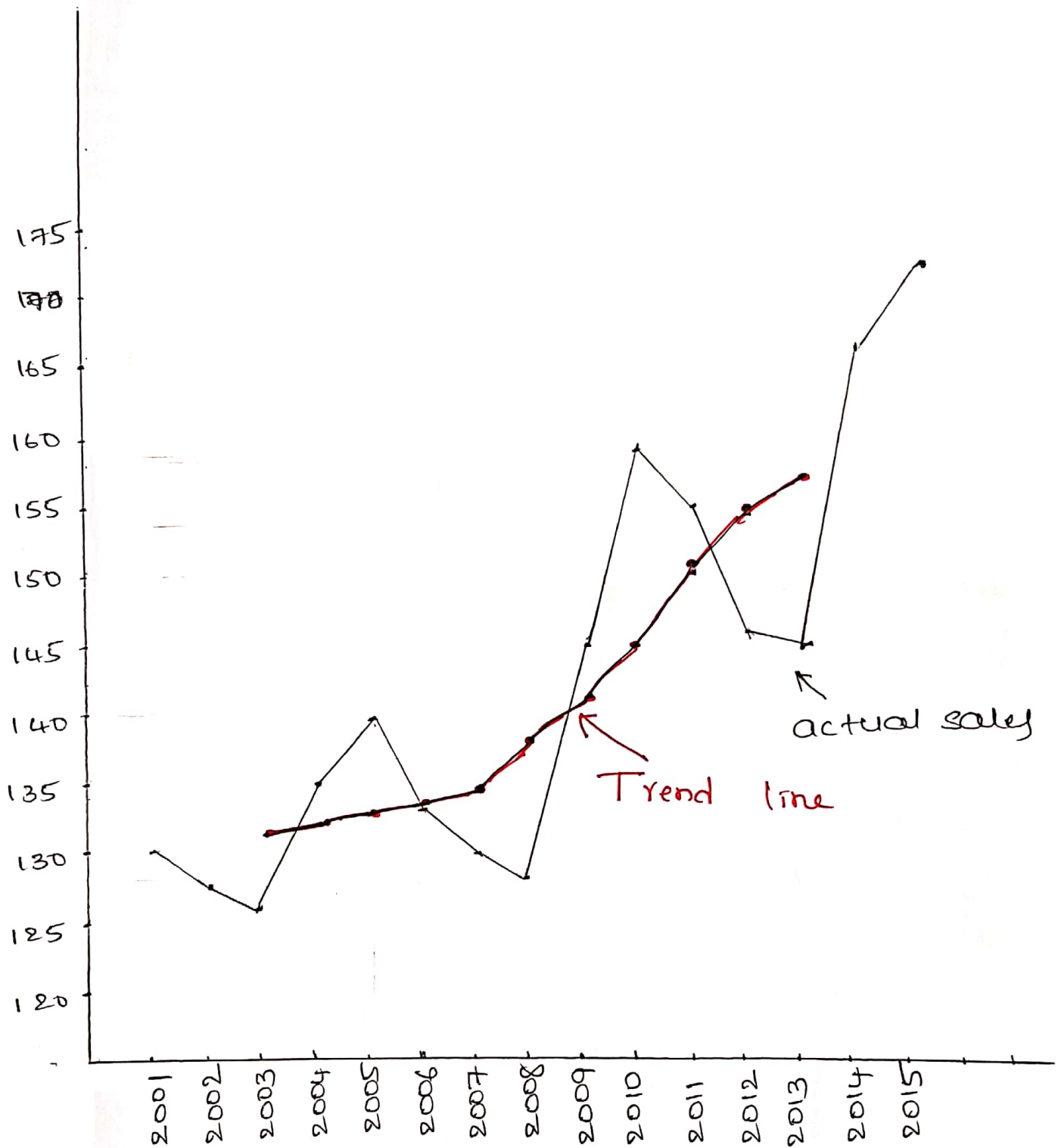
③ Ex) Find the trend of annual sales of a trading organisation by 5 yearly moving Average method.

Year	2001	2002	2003	2004	2005	06	07	08	09	10	11	12	13	14	15
Sales	130	127	124	135	140	132	129	127	145	158	153	146	145	164	170

Solution: Trend values by 5 yearly moving Av. method

Year	Sales	5 yearly moving total	5 yearly moving Average Trend Values
2001	130	—	—
2002	127	—	—
2003	124	656	131.2
2004	135	658	131.6
2005	140	660	132
2006	132	663	132.6
2007	129	673	134.6
2008	127	691	138.2
2009	145	712	142.4
2010	158	729	145.8
2011	153	747	149.4
2012	146	766	153.2
2013	145	778	155.6
2014	164	—	—
2015	170	—	—

(7)



Ex4.) calculate Five yearly moving averages for the data in Ex. (1).

Year	Sales	5 yearly Average Totals	5 yearly moving Avg. Trend Values
1991	242	—	—
1992	250	—	—
1993	252	1246	249.2
1994	249	1259	251.8
1995	253	1260	252.0
1996	255	1265	253.0
1997	251	1276	255.2
1998	257	1288	257.6
1999	260	—	—
2000	265	—	—

