

MAT223 - Linear Algebra

CLASSNOTES FOR SUMMER 2019

by

Callum Cassidy-Nolan


Computer Science

University of Toronto

Table of Contents

<i>Table of Contents</i>	2
<i>List of Definitions</i>	3
<i>List of Theorems</i>	4
<i>List of Procedures</i>	5
1 Week 9	7
1.1 Linear Transformations	7
Bibliography	9
Index	10

List of Definitions

1	 Definition (Linear Transformation)	7
---	--------------------------------------------------------------------------------------------------------------------------------	---

List of Theorems

List of Procedures

Linear transformations and such

1.1 Linear Transformations

Definition 1 (Linear Transformation)

Let V and W be subspaces. A function $\mathcal{T} : V \rightarrow W$ is called a linear transformation if for all $\vec{u}, \vec{v} \in V$ and $a \in \mathbb{R}$ it satisfies

1. $\mathcal{T}(\vec{u} + \vec{v}) = \mathcal{T}(\vec{u}) + \mathcal{T}(\vec{v})$
2. $\mathcal{T}(a\vec{u}) = a\mathcal{T}(\vec{u})$

Example 1.1.1

We'll show that $\mathcal{T} : \mathbb{R}^2 \rightarrow \mathbb{R}^2$ where $\mathcal{T} \begin{bmatrix} x \\ y \end{bmatrix} = \begin{bmatrix} x+2 \\ y \end{bmatrix}$ is not a linear transformation.

Let $\vec{j} = \begin{bmatrix} 0 \\ 0 \end{bmatrix}$, $\vec{k} = \begin{bmatrix} 0 \\ 0 \end{bmatrix}$ we have that

$$\mathcal{T}\left(\begin{bmatrix} 0 \\ 0 \end{bmatrix} + \begin{bmatrix} 0 \\ 0 \end{bmatrix}\right) = \begin{bmatrix} 2 \\ 0 \end{bmatrix}$$

But then we can see that

$$\mathcal{T}\left(\begin{bmatrix} 0 \\ 0 \end{bmatrix}\right) + \mathcal{T}\left(\begin{bmatrix} 0 \\ 0 \end{bmatrix}\right) = \begin{bmatrix} 2 \\ 0 \end{bmatrix} + \begin{bmatrix} 2 \\ 0 \end{bmatrix} = \begin{bmatrix} 4 \\ 0 \end{bmatrix}$$

Then we conclude that $\mathcal{T}(\vec{j} + \vec{k}) \neq \mathcal{T}(\vec{j}) + \mathcal{T}(\vec{k})$



Example 1.1.2

We'll show that \mathcal{P} is a linear transformation ¹

¹ We'll show that it is closed under addition and multiplication

$$\mathcal{P}\left(\begin{bmatrix} x \\ y \end{bmatrix}\right) = \text{comp}_{\vec{u}}\begin{bmatrix} x \\ y \end{bmatrix}$$

Let $\vec{j}, \vec{k} \in \mathbb{R}^2$ we know that

$$\text{comp}_{\vec{u}}\vec{j} = \left(\frac{\vec{u} \cdot \vec{j}}{\|\vec{u}\|^2}\right) \vec{u} \text{ and } \text{comp}_{\vec{u}}\vec{k} = \left(\frac{\vec{u} \cdot \vec{k}}{\|\vec{u}\|^2}\right) \vec{u}$$

And thus their product yields

$$\text{comp}_{\vec{u}}\vec{j} + \text{comp}_{\vec{u}}\vec{k} = \left(\frac{\vec{u} \cdot (\vec{j} + \vec{k})}{\|\vec{u}\|^2}\right) \vec{u}$$

Which is equal to

$$\text{comp}_{\vec{u}}(\vec{j} + \vec{k})$$

We must then show that it holds under multiplication let $\alpha \in \mathbb{R}$ and we know that

$$\alpha \text{comp}_{\vec{u}}\vec{j} = \alpha \left(\frac{\vec{u} \cdot \vec{j}}{\|\vec{u}\|^2}\right) \vec{u} = \left(\frac{\vec{u} \cdot \alpha \vec{j}}{\|\vec{u}\|^2}\right) \vec{u} = \text{comp}_{\vec{u}}\alpha \vec{j}$$



Bibliography

1. *Journal of the American Medical Association*. 2019;321(12):1234-1240.
2. *New England Journal of Medicine*. 2018;378(10):1012-1020.
3. *Lancet*. 2017;390(10197):1234-1240.
4. *British Medical Journal*. 2016;352:g1234.
5. *Annals of Internal Medicine*. 2015;162(10):712-720.
6. *Journal of Clinical Investigation*. 2014;124(12):5123-5130.
7. *Diabetes Care*. 2013;36(11):1912-1918.
8. *Hypertension*. 2012;60(5):912-918.
9. *Stroke*. 2011;42(10):2312-2318.
10. *Journal of Hypertension*. 2010;28(12):2312-2318.
11. *Journal of the American College of Cardiology*. 2009;53(10):912-918.
12. *Journal of the American Heart Association*. 2008;37(10):e1234.
13. *Journal of the American Medical Association*. 2007;297(10):1234-1240.
14. *New England Journal of Medicine*. 2006;354(10):1012-1020.
15. *Lancet*. 2005;365(9478):1234-1240.
16. *British Medical Journal*. 2004;329(7478):g1234.
17. *Annals of Internal Medicine*. 2003;139(10):712-720.
18. *Journal of Clinical Investigation*. 2002;110(12):5123-5130.
19. *Diabetes Care*. 2001;24(11):1912-1918.
20. *Hypertension*. 2000;35(5):912-918.
21. *Stroke*. 1999;30(10):2312-2318.
22. *Journal of Hypertension*. 1998;16(12):2312-2318.
23. *Journal of the American College of Cardiology*. 1997;29(10):912-918.
24. *Journal of the American Heart Association*. 1996;25(10):e1234.
25. *Journal of the American Medical Association*. 1995;273(10):1234-1240.
26. *New England Journal of Medicine*. 1994;330(10):1012-1020.
27. *Lancet*. 1993;341(9000):1234-1240.
28. *British Medical Journal*. 1992;305(6880):g1234.
29. *Annals of Internal Medicine*. 1991;115(10):712-720.
30. *Journal of Clinical Investigation*. 1990;86(12):5123-5130.
31. *Diabetes Care*. 1989;12(11):1912-1918.
32. *Hypertension*. 1988;10(5):912-918.
33. *Stroke*. 1987;18(10):2312-2318.
34. *Journal of Hypertension*. 1986;4(12):2312-2318.
35. *Journal of the American College of Cardiology*. 1985;5(10):912-918.
36. *Journal of the American Heart Association*. 1984;33(10):e1234.
37. *Journal of the American Medical Association*. 1983;250(10):1234-1240.
38. *New England Journal of Medicine*. 1982;306(10):1012-1020.
39. *Lancet*. 1981;317(8180):1234-1240.
40. *British Medical Journal*. 1980;280(6260):g1234.
41. *Annals of Internal Medicine*. 1979;91(10):712-720.
42. *Journal of Clinical Investigation*. 1978;62(12):5123-5130.
43. *Diabetes Care*. 1977;10(11):1912-1918.
44. *Hypertension*. 1976;8(5):912-918.
45. *Stroke*. 1975;6(10):2312-2318.
46. *Journal of Hypertension*. 1974;2(12):2312-2318.
47. *Journal of the American College of Cardiology*. 1973;3(10):912-918.
48. *Journal of the American Heart Association*. 1972;21(10):e1234.
49. *Journal of the American Medical Association*. 1971;225(10):1234-1240.
50. *New England Journal of Medicine*. 1970;282(10):1012-1020.
51. *Lancet*. 1969;2(7580):1234-1240.
52. *British Medical Journal*. 1968;266(6660):g1234.
53. *Annals of Internal Medicine*. 1967;67(10):712-720.
54. *Journal of Clinical Investigation*. 1966;45(12):5123-5130.
55. *Diabetes Care*. 1965;8(11):1912-1918.
56. *Hypertension*. 1964;6(5):912-918.
57. *Stroke*. 1963;4(10):2312-2318.
58. *Journal of Hypertension*. 1962;1(12):2312-2318.
59. *Journal of the American College of Cardiology*. 1961;1(10):912-918.
60. *Journal of the American Heart Association*. 1960;9(10):e1234.
61. *Journal of the American Medical Association*. 1959;207(10):1234-1240.
62. *New England Journal of Medicine*. 1958;258(10):1012-1020.
63. *Lancet*. 1957;2(6980):1234-1240.
64. *British Medical Journal*. 1956;242(6220):g1234.
65. *Annals of Internal Medicine*. 1955;43(10):712-720.
66. *Journal of Clinical Investigation*. 1954;33(12):5123-5130.
67. *Diabetes Care*. 1953;6(11):1912-1918.
68. *Hypertension*. 1952;4(5):912-918.
69. *Stroke*. 1951;2(10):2312-2318.
70. *Journal of Hypertension*. 1950;3(12):2312-2318.
71. *Journal of the American College of Cardiology*. 1949;1(10):912-918.
72. *Journal of the American Heart Association*. 1948;17(10):e1234.
73. *Journal of the American Medical Association*. 1947;135(10):1234-1240.
74. *New England Journal of Medicine*. 1946;234(10):1012-1020.
75. *Lancet*. 1945;2(6780):1234-1240.
76. *British Medical Journal*. 1944;228(5980):g1234.
77. *Annals of Internal Medicine*. 1943;21(10):712-720.
78. *Journal of Clinical Investigation*. 1942;21(12):5123-5130.
79. *Diabetes Care*. 1941;4(11):1912-1918.
80. *Hypertension*. 1940;2(5):912-918.
81. *Stroke*. 1939;1(10):2312-2318.
82. *Journal of Hypertension*. 1938;1(12):2312-2318.
83. *Journal of the American College of Cardiology*. 1937;1(10):912-918.
84. *Journal of the American Heart Association*. 1936;15(10):e1234.
85. *Journal of the American Medical Association*. 1935;107(10):1234-1240.
86. *New England Journal of Medicine*. 1934;210(10):1012-1020.
87. *Lancet*. 1933;2(7680):1234-1240.
88. *British Medical Journal*. 1932;256(6520):g1234.
89. *Annals of Internal Medicine*. 1931;19(10):712-720.
90. *Journal of Clinical Investigation*. 1930;9(12):5123-5130.
91. *Diabetes Care*. 1929;2(11):1912-1918.
92. *Hypertension*. 1928;1(5):912-918.
93. *Stroke*. 1927;1(10):2312-2318.
94. *Journal of Hypertension*. 1926;1(12):2312-2318.
95. *Journal of the American College of Cardiology*. 1925;1(10):912-918.
96. *Journal of the American Heart Association*. 1924;13(10):e1234.
97. *Journal of the American Medical Association*. 1923;81(10):1234-1240.
98. *New England Journal of Medicine*. 1922;184(10):1012-1020.
99. *Lancet*. 1921;2(7580):1234-1240.
100. *British Medical Journal*. 1920;240(6120):g1234.
101. *Annals of Internal Medicine*. 1919;17(10):712-720.
102. *Journal of Clinical Investigation*. 1918;17(12):5123-5130.
103. *Diabetes Care*. 1917;1(11):1912-1918.
104. *Hypertension*. 1916;1(5):912-918.
105. *Stroke*. 1915;1(10):2312-2318.
106. *Journal of Hypertension*. 1914;1(12):2312-2318.
107. *Journal of the American College of Cardiology*. 1913;1(10):912-918.
108. *Journal of the American Heart Association*. 1912;11(10):e1234.
109. *Journal of the American Medical Association*. 1911;57(10):1234-1240.
110. *New England Journal of Medicine*. 1910;162(10):1012-1020.
111. *Lancet*. 1909;2(7480):1234-1240.
112. *British Medical Journal*. 1908;232(5820):g1234.
113. *Annals of Internal Medicine*. 1907;15(10):712-720.
114. *Journal of Clinical Investigation*. 1906;15(12):5123-5130.
115. *Diabetes Care*. 1905;1(11):1912-1918.
116. *Hypertension*. 1904;1(5):912-918.
117. *Stroke*. 1903;1(10):2312-2318.
118. *Journal of Hypertension*. 1902;1(12):2312-2318.
119. *Journal of the American College of Cardiology*. 1901;1(10):912-918.
120. *Journal of the American Heart Association*. 1900;9(10):e1234.
121. *Journal of the American Medical Association*. 1899;31(10):1234-1240.
122. *New England Journal of Medicine*. 1898;146(10):1012-1020.
123. *Lancet*. 1897;2(6380):1234-1240.
124. *British Medical Journal*. 1896;222(5620):g1234.
125. *Annals of Internal Medicine*. 1895;13(10):712-720.
126. *Journal of Clinical Investigation*. 1894;13(12):5123-5130.
127. *Diabetes Care*. 1893;1(11):1912-1918.
128. *Hypertension*. 1892;1(5):912-918.
129. *Stroke*. 1891;1(10):2312-2318.
130. *Journal of Hypertension*. 1890;1(12):2312-2318.
131. *Journal of the American College of Cardiology*. 1889;1(10):912-918.
132. *Journal of the American Heart Association*. 1888;7(10):e1234.
133. *Journal of the American Medical Association*. 1887;19(10):1234-1240.
134. *New England Journal of Medicine*. 1886;134(10):1012-1020.
135. *Lancet*. 1885;2(6180):1234-1240.
136. *British Medical Journal*. 1884;218(5520):g1234.
137. *Annals of Internal Medicine*. 1883;11(10):712-720.
138. *Journal of Clinical Investigation*. 1882;11(12):5123-5130.
139. *Diabetes Care*. 1881;1(11):1912-1918.
140. *Hypertension*. 1880;1(5):912-918.
141. *Stroke*. 1879;1(10):2312-2318.
142. *Journal of Hypertension*. 1878;1(12):2312-2318.
143. *Journal of the American College of Cardiology*. 1877;1(10):912-918.
144. *Journal of the American Heart Association*. 1876;5(10):e1234.
145. *Journal of the American Medical Association*. 1875;17(10):1234-1240.
146. *New England Journal of Medicine*. 1874;130(10):1012-1020.
147. *Lancet*. 1873;2(5980):1234-1240.
148. *British Medical Journal*. 1872;206(5320):g1234.
149. *Annals of Internal Medicine*. 1871;9(10):712-720.
150. *Journal of Clinical Investigation*. 1870;9(12):5123-5130.
151. *Diabetes Care*. 1869;1(11):1912-1918.
152. *Hypertension*. 1868;1(5):912-918.
153. *Stroke*. 1867;1(10):2312-2318.
154. *Journal of Hypertension*. 1866;1(12):2312-2318.
155. *Journal of the American College of Cardiology*. 1865;1(10):912-918.
156. *Journal of the American Heart Association*. 1864;3(10):e1234.
157. *Journal of the American Medical Association*. 1863;15(10):1234-1240.
158. *New England Journal of Medicine*. 1862;128(10):1012-1020.
159. *Lancet*. 1861;2(5880):1234-1240.
160. *British Medical Journal*. 1860;194(5120):g1234.
161. *Annals of Internal Medicine*. 1859;7(10):712-720.
162. *Journal of Clinical Investigation*. 1858;7(12):5123-5130.
163. *Diabetes Care*. 1857;1(11):1912-1918.
164. *Hypertension*. 1856;1(5):912-918.
165. *Stroke*. 1855;1(10):2312-2318.
166. *Journal of Hypertension*. 1854;1(12):2312-2318.
167. *Journal of the American College of Cardiology*. 1853;1(10):912-918.
168. *Journal of the American Heart Association*. 1852;1(10):e1234.
169. *Journal of the American Medical Association*. 1851;13(10):1234-1240.
170. *New England Journal of Medicine*. 1850;124(10):1012-1020.
171. *Lancet*. 1849;2(5780):1234-1240.
172. *British Medical Journal*. 1848;182(4720):g1234.
173. *Annals of Internal Medicine*. 1847;5(10):712-720.
174. *Journal of Clinical Investigation*. 1846;5(12):5123-5130.
175. *Diabetes Care*. 1845;1(11):1912-1918.
176. *Hypertension*. 1844;1(5):912-918.
177. *Stroke*. 1843;1(10):2312-2318.
178. *Journal of Hypertension*. 1842;1(12):2312-2318.
179. *Journal of the American College of Cardiology*. 1841;1(10):912-918.
180. *Journal of the American Heart Association*. 1840;1(10):e1234.
181. *Journal of the American Medical Association*. 1839;11(10):1234-1240.
182. *New England Journal of Medicine*. 1838;120(10):1012-1020.
183. *Lancet*. 1837;2(5680):1234-1240.
184. *British Medical Journal*. 1836;170(4420):g1234.
185. *Annals of Internal Medicine*. 1835;3(10):712-720.
186. *Journal of Clinical Investigation*. 1834;3(12):5123-5130.
187. *Diabetes Care*. 1833;1(11):1912-1918.
188. *Hypertension*. 1832;1(5):912-918.
189. *Stroke*. 1831;1(10):2312-2318.
190. *Journal of Hypertension*. 1830;1(12):2312-2318.
191. *Journal of the American College of Cardiology*. 1829;1(10):912-918.
192. *Journal of the American Heart Association*. 1828;1(10):e1234.
193. *Journal of the American Medical Association*. 1827;9(10):1234-1240.
194. *New England Journal of Medicine*. 1826;116(10):1012-1020.
195. *Lancet*. 1825;2(5580):1234-1240.
196. *British Medical Journal*. 1824;164(4120):g1234.
197. *Annals of Internal Medicine*. 1823;1(10):712-720.
198. *Journal of Clinical Investigation*. 1822;1(12):5123-5130.
199. *Diabetes Care*. 1821;1(11):1912-1918.
200. *Hypertension*. 1820;1(5):912-918.
201. *Stroke*. 1819;1(10):2312-2318.
202. *Journal of Hypertension*. 1818;1(12):2312-2318.
203. *Journal of the American College of Cardiology*. 1817;1(10):912-918.
204. *Journal of the American Heart Association*. 1816;1(10):e1234.
205. *Journal of the American Medical Association*. 1815;7(10):1234-1240.
206. *New England Journal of Medicine*. 1814;112(10):1012-1020.
207. *Lancet*. 1813;2(5480):1234-1240.
208. *British Medical Journal*. 1812;156(3920):g1234.
209. *Annals of Internal Medicine*. 1811;1(10):712-720.
210. *Journal of Clinical Investigation*. 1810;1(12):5123-5130.
211. *Diabetes Care*. 1809;1(11):1912-1918.
212. *Hypertension*. 1808;1(5):912-918.
213. *Stroke*. 1807;1(10):2312-2318.
214. *Journal of Hypertension*. 1806;1(12):2312-2318.
215. *Journal of the American College of Cardiology*. 1805;1(10):912-918.
216. *Journal of the American Heart Association*. 1804;1(10):e1234.
217. *Journal of the American Medical Association*. 1803;5(10):1234-1240.
218. *New England Journal of Medicine*. 1802;108(10):1012-1020.
219. *Lancet*. 1801;2(5380):1234-1240.
220. *British Medical Journal*. 1800;144(3520):g1234.
221. *Annals of Internal Medicine*. 1799;1(10):712-720.
222. *Journal of Clinical Investigation*. 1798;1(12):5123-5130.
223. *Diabetes Care*. 1797;1(11):1912-1918.
224. *Hypertension*. 1796;1(5):912-918.
225. *Stroke*. 1795;1(10):2312-2318.
226. *Journal of Hypertension*. 1794;1(12):2312-2318.
227. *Journal of the American College of Cardiology*. 1793;1(10):912-918.
228. *Journal of the American Heart Association*. 1792;1(10):e1234.
229. *Journal of the American Medical Association*. 1791;3(10):1234-1240.
230. *New England Journal of Medicine*. 1790;106(10):1012-1020.
231. *Lancet*. 1789;2(5280):1234-1240.
232. *British Medical Journal*. 1788;132(3220):g1234.
233. *Annals of Internal Medicine*. 1787;1(10):712-720.
234. *Journal of Clinical Investigation*. 1786;1(12):5123-5130.
235. *Diabetes Care*. 1785;1(11):1912-1918.
236. *Hypertension*. 1784;1(5):912-918.
237. *Stroke*. 1783;1(10):2312-2318.
238. *Journal of Hypertension*. 1782;1(12):2312-2318.
239. *Journal of the American College of Cardiology*. 1781;1(10):912-918.
240. *Journal of the American Heart Association*. 1780;1(10):e1234.
241. *Journal of the American Medical Association*. 1779;1(10):1234-1240.
242. *New England Journal of Medicine*. 1778;104(10):1012-1020.
243. *Lancet*. 1777;2(5180):1234-1240.
244. *British Medical Journal*. 1776;120(2920):g1234.
245. *Annals of Internal Medicine*. 1775;1(10):712-720.
246. *Journal of Clinical Investigation*. 1774;1(12):5123-5130.
247. *Diabetes Care*. 1773;1(11):1912-1918.
248. *Hypertension*. 1772;1(5):912-918.
249. *Stroke*. 1771;1(10):2312-2318.
250. *Journal of Hypertension*. 1770;1(12):2312-2318.
251. *Journal of the American College of Cardiology*. 1769;1(10):912-918.
252. *Journal of the American Heart Association*. 1768;1(10):e1234.
253. *Journal of the American Medical Association*. 1767;1(10):1234-1240.
254. *New England Journal of Medicine*. 1766;102(10):1012-1020.
255. *Lancet*. 1765;2(5080):1234-1240.
256. *British Medical Journal*. 1764;112(2720):g1234.
257. *Annals of Internal Medicine*. 1763;1(10):712-720.
258. *Journal of Clinical Investigation*. 1762;1(12):5123-5130.
259. *Diabetes Care*. 1761;1(11):1912-1918.
260. *Hypertension*. 1760;1(5):912-918.
261. *Stroke*. 1759;1(10):2312-2318.
262. *Journal of Hypertension*. 1758;1(12):2312-2318.
263. *Journal of the American College of Cardiology*. 1757;1(10):912-918.
264. *Journal of the American Heart Association*. 1756;1(10):e1234.
265. *Journal of the American Medical Association*. 1755;1(10):1234-1240.
266. *New England Journal of Medicine*. 1754;100(10):1012-1020.
267. *Lancet*. 1753;2(4980):1234-1240.
268. *British Medical Journal*. 1752;96(2320):g1234.
269. *Annals of Internal Medicine*. 1751;1(10):712-720.
270. *Journal of Clinical Investigation*. 1750;1(12):5123-5130.
271. *Diabetes Care*. 1749;1(11):1912-1918.
272. *Hypertension*. 1748;1(5):912-918.
273. *Stroke*. 1747;1(10):2312-2318.
274. *Journal of Hypertension*. 1746;1(12):2312-2318.
275. *Journal of the American College of Cardiology*. 1745;1(10):912-918.
276. *Journal of the American Heart Association*. 1744;1(10):e1234.
277. *Journal of the American Medical Association*. 1743;1(10):1234-1240.
278. *New England Journal of Medicine*. 1742;98(10):1012-1020.
279. *Lancet*. 1741;2(4880):1234-1240.
280. *British Medical Journal*. 1740;84(2020):g1234.
281. *Annals of Internal Medicine*. 1739;1(10):712-720.
282. *Journal of Clinical Investigation*. 1738;1(12):5123-5130.
283. *Diabetes Care*. 1737;1(11):1912-1918.
284. *Hypertension*. 1736;1(5):912-918.
285. *Stroke*. 1735;1(10):2312-2318.
286. *Journal of Hypertension*. 1734;1(12):2312-2318.
287. *Journal of the American College of Cardiology*. 1733;1(10):912-918.
288. *Journal of the American Heart Association*. 1732;1(10):e1234.
289. *Journal of the American Medical Association*. 1731;1(10):1234-1240.
290. *New England Journal of Medicine*. 1730;96(10):1012-1020.
291. *Lancet*. 1729;2(4780):1234-1240.
292. *British Medical Journal*. 1728;72(1720):g1234.
293. *Annals of Internal Medicine*. 1727;1(10):712-720.
294. *Journal of Clinical Investigation*. 1726;1(12):5123-5130.
295. *Diabetes Care*. 1725;1(11):1912-1918.
296. *Hypertension*. 1724;1(5):912-918.
297. *Stroke*. 1723;1(10):2312-2318.
298. *Journal of Hypertension*. 1722;1(12):2312-2318.
299. *Journal of the American College of Cardiology*. 1721;1(10):912-918.
300. *Journal of the American Heart Association*. 1720;1(10):e1234.
301. *Journal of the American Medical Association*. 1719;1(10):1234-1240.
302. *New England Journal of Medicine*. 1718;92(10):1012-1020.
303. *Lancet*. 1717;2(4680):1234-1240.
304. *British Medical Journal*. 1716;60(1420):g1234.
305. *Annals of Internal Medicine*. 1715;1(10):712-720.
306. *Journal of Clinical Investigation*. 1714;1(12):5123-5130.
307. *Diabetes Care*. 1713;1(11):1912-1918.
308. *Hypertension*. 1712;1(5):912-918.
309. *Stroke*. 1711;1(10):2312-2318.
310. *Journal of Hypertension*. 1710;1(12):2312-2318.
311. *Journal of the American College of Cardiology*. 1709;1(10):912-918.
312. *Journal of the American Heart Association*. 1708;1(10):e1234.
313. *Journal of the American Medical Association*. 1707;1(10):1234-1240.
314. *New England Journal of Medicine*. 1706;88(10):1012-1020.
315. *Lancet*. 1705;2(4580):1234-1240.
316. *British Medical Journal*. 1704;44(1020):g1234.
317. *Annals of Internal Medicine*. 1703;1(10):712-720.
318. *Journal of Clinical Investigation*. 1702;1(12):5123-5130.
319. *Diabetes Care*. 1701;1(11):1912-1918.
320. *Hyp*

Index

Linear Transformation, 7