

NEEDED MATH

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Item #	Survey Item Wording (FREQUENCY OF USE)	Math Educators (MEd)		Tech Educators (TEd)		Technicians		Whole Group		
		MEd Rank	MEd Mean	TEd Rank	TEd Mean	Tech Rank	Mean	Rank	Mean	Item
3	Take measurements using physical tools or instruments (Freq)	1	4.80	1	4.79	1	4.67	1	4.74	3
26	Use blueprints, diagrams, drawings, flow charts, or schematics (Freq)	7	4.56	2	4.61	4	4.34	2	4.51	26
28	Use metric (or SI) prefixes (Freq)	3	4.68	7	4.35	2	4.54	3	4.47	28
4	Make estimates (Freq)	2	4.73	4	4.48	6	4.25	4	4.43	4
2	Work with ratios or rates (Freq)	6	4.62	6	4.38	5	4.30	5	4.39	2
6	Read, document, and/or interpret sensor data (Freq)	5	4.66	5	4.44	10	4.06	6	4.34	6
5	Do work that requires accuracy to a specified tolerance (Freq)	4	4.68	3	4.48	11	3.94	7	4.31	5
39	Use data to troubleshoot problems (Freq)	10	4.19	8	4.25	3	4.34	8	4.27	39
1	Make conversions (Freq)	12	4.09	9	4.15	8	4.16	9	4.15	1
31	Make conversions between different ways of expressing numbers (Freq)	8	4.37	10	4.04	7	4.18	10	4.14	31
8	Read and interpret tables, graphs, or plots of data (Freq)	15	4.07	11	4.02	9	4.15	11	4.08	8
32	Work with prepared spreadsheets (Freq)	14	4.07	12	3.79	12	3.81	12	3.85	32
21	Use spatial reasoning (Freq)	9	4.30	13	3.78	17	3.34	13	3.72	21
22	Use angle measurements (Freq)	11	4.09	15	3.62	24	3.21	14	3.56	22
7	Use sampling to collect data (Freq)	21	3.77	14	3.66	20	3.32	15	3.55	7
34	Use a scientific or graphing calculator (Freq)	19	3.85	18	3.57	19	3.33	16	3.54	34
11	Read and analyze control charts (Freq)	13	4.08	17	3.60	27	3.13	17	3.51	11
37	Use math to prepare reports (Freq)	24	3.66	20	3.49	21	3.31	18	3.46	37
13	Substitute numbers into formulas and evaluate (Freq)	16	3.92	25	3.26	14	3.46	19	3.44	13
20	Use geometric topics (Freq)	25	3.65	19	3.54	26	3.18	20	3.44	20
36	Collect, analyze, and use information from a system (Freq)	18	3.87	16	3.60	32	2.92	21	3.42	36
10	Use, interpret, or calculate statistical measures (Freq)	27	3.47	24	3.29	13	3.52	22	3.41	10
18	Find perimeters, areas, or volumes (Freq)	17	3.90	22	3.39	23	3.24	23	3.41	18
27	Use scientific or engineering notations (Freq)	20	3.82	28	3.12	15	3.44	24	3.35	27
16	Use direct or inverse variation (Freq)	22	3.73	23	3.36	28	3.10	25	3.33	16
12	Use data to optimize a production process (Freq)	29	3.41	21	3.40	29	3.10	26	3.29	12
25	Work with amplitude, frequency, or period (Freq)	31	3.31	27	3.17	16	3.42	27	3.28	25
30	Use inequalities (Freq)	26	3.65	30	3.09	22	3.29	28	3.25	30
9	Make tables, graphs, or plots of data (Freq)	34	3.20	29	3.11	18	3.33	29	3.16	9
33	Use spreadsheets for tasks beyond working with prepared spreadsheets (Freq)	32	3.27	32	2.95	25	3.20	30	3.09	33
24	Use right triangle trigonometry (Freq)	30	3.39	33	2.94	34	2.81	31	2.97	24
23	Use Geometric Dimensioning and Tolerance (Freq)	23	3.69	31	3.08	36	2.45	32	2.96	23
38	Use graphs, tables, data, formulas or simulations (Freq)	33	3.23	34	2.75	31	2.92	33	2.89	38
17	Work with exponential functions (Freq)	37	2.74	35	2.72	30	3.04	34	2.83	17
35	Use math when using a CNC system (Freq)	28	3.41	26	3.19	40	1.93	35	2.79	35
15	Fit a curve to data (Freq)	36	2.78	37	2.50	35	2.74	36	2.63	15
19	Work with logarithms (Freq)	38	2.68	39	2.47	33	2.82	37	2.63	19
40	Use math to forecast performance measures or future outcomes (Freq)	35	2.95	38	2.47	37	2.31	38	2.50	40
14	Manipulate a formula to get a new formula (Freq)	39	2.55	36	2.55	39	1.98	39	2.47	14
29	Use complex numbers (Freq)	40	1.87	40	1.83	38	2.16	40	1.95	29

Note: Items highlighted in yellow indicate a significant ANOVA result with a p-value less than 0.05.