

NEEDED MATH

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Item #	Survey Item Wording (PREPARATION)	Math Educators (MEd)		Tech Educators (TEd)		Technicians		Whole Group (WG) Ranking		
		MEd Rank	MEd Mean	TEd Rank	TEd Mean	Tech Rank	Mean	By Rank	WG Mean	By Item
31	Make conversions between different ways of expressing numbers (Prep)	2	3.48	4	3.26	2	3.02	1	3.22	31
28	Use metric (or SI) prefixes (Prep)	7	3.16	1	3.32	3	3.01	2	3.19	28
18	Find perimeters, areas, or volumes (Prep)	3	3.41	8	3.15	5	2.98	3	3.12	18
2	Work with ratios or rates (Prep)	5	3.26	5	3.24	8	2.93	4	3.12	2
13	Substitute numbers into formulas and evaluate (Prep)	1	3.63	12	3.09	9	2.88	5	3.11	13
1	Make conversions (Prep)	8	3.15	6	3.16	7	2.93	6	3.06	1
34	Use a scientific or graphing calculator (Prep)	4	3.33	9	3.14	15	2.70	7	3.03	34
8	Read and interpret tables, graphs, or plots of data (Prep)	9	3.13	10	3.12	11	2.84	8	3.02	8
22	Use angle measurements (Prep)	6	3.22	11	3.11	14	2.73	9	3.00	22
30	Use inequalities (Prep)	10	3.12	18	2.93	6	2.93	10	2.96	30
20	Use geometric topics (Prep)	13	2.98	15	3.06	13	2.76	11	2.95	20
3	Take measurements using physical tools or instruments (Prep)	20	2.64	2	3.30	17	2.65	12	2.94	3
27	Use scientific or engineering notations (Prep)	12	3.02	17	2.95	10	2.84	13	2.92	27
9	Make tables, graphs, or plots of data (Prep)	15	2.84	20	2.87	1	3.21	14	2.92	9
5	Do work that requires accuracy to a specified tolerance (Prep)	21	2.60	7	3.15	19	2.64	15	2.87	5
24	Use right triangle trigonometry (Prep)	11	3.03	21	2.87	12	2.78	16	2.87	24
4	Make estimates (Prep)	17	2.81	14	3.07	21	2.63	17	2.86	4
6	Read, document, and/or interpret sensor data (Prep)	22	2.60	13	3.08	16	2.68	18	2.86	6
14	Manipulate a formula to get a new formula (Prep)	14	2.87	23	2.81	4	3.00	19	2.85	14
26	Use blueprints, diagrams, drawings, flow charts, or schematics (Prep)	27	2.34	3	3.27	26	2.49	20	2.85	26
39	Use data to troubleshoot problems (Prep)	30.5	2.31	16	2.95	25	2.54	21	2.71	39
32	Work with prepared spreadsheets (Prep)	32	2.27	19	2.90	20	2.63	22	2.70	32
10	Use, interpret, or calculate statistical measures (Prep)	19	2.75	28	2.61	18	2.64	23	2.64	10
17	Work with exponential functions (Prep)	16	2.81	29	2.61	23	2.59	24	2.64	17
7	Use sampling to collect data (Prep)	23	2.43	22	2.83	29	2.42	25	2.62	7
16	Use direct or inverse variation (Prep)	18	2.76	25	2.68	28	2.44	26	2.61	16
37	Use math to prepare reports (Prep)	29	2.32	27	2.64	24	2.59	27	2.57	37
25	Work with amplitude, frequency, or period (Prep)	24	2.41	26	2.67	30	2.41	28	2.54	25
15	Fit a curve to data (Prep)	25	2.38	35	2.40	22	2.61	29	2.47	15
21	Use spatial reasoning (Prep)	30.5	2.31	24	2.73	36	2.15	30	2.46	21
19	Work with logarithms (Prep)	26	2.38	36	2.38	27	2.46	31	2.40	19
11	Read and analyze control charts (Prep)	33.5	2.20	31	2.57	33	2.18	32	2.37	11
12	Use data to optimize a production process (Prep)	28	2.34	33	2.49	34	2.18	33	2.35	12
36	Collect, analyze, and use information from a system (Prep)	35	2.18	30	2.57	37	2.09	34	2.35	36
38	Use graphs, tables, data, formulas or simulations (Prep)	36	2.17	37	2.32	31	2.34	35	2.30	38
22	Use spreadsheets for tasks beyond working with prepared spreadsheets (Prep)	38	1.96	34	2.44	32	2.27	36	2.30	22
25	Use math when using a CNC system (Prep)	37	2.13	32	2.53	34	1.97	37	2.27	25
29	Use complex numbers (Prep)	33.5	2.20	39	2.12	35	2.16	38	2.15	29
23	Use Geometric Dimensioning and Tolerance (Prep)	39	1.96	38	2.31	40	1.93	39	2.12	23
40	Use math to forecast performance measures or future outcomes (Prep)	40	1.91	40	2.07	38	2.02	40	2.03	40

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