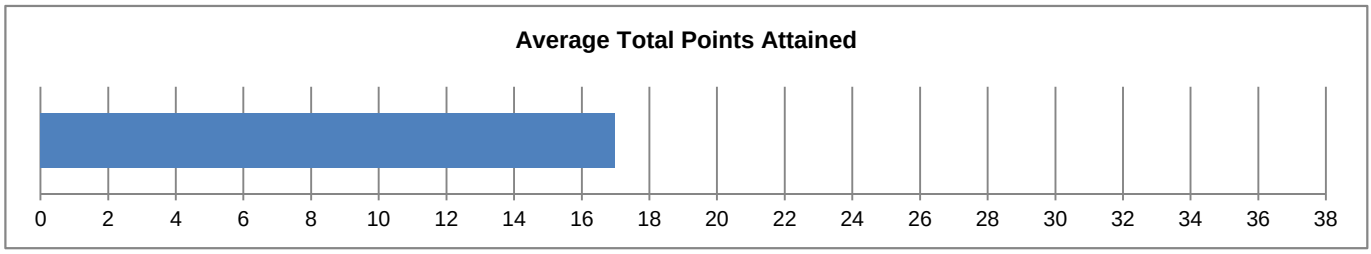
Sam Houston State University

CAT Institutional Report

August 2016 - College of Sciences

CAT Overview: Descriptive Statistics for CAT Total Score
Sam Houston State University: August 2016 - College of Sciences

	N	Min.	Max.	Mean	Std. Dev
CAT Total Score	109	5.00	30.00	16.98	5.83



CAT Demographics: Descriptive Statistics for Sample

		Freq.	Freq. %
Gender	**Male**	44	40.4%
	Female	65	59.6%
Class Standing	**Freshman**	1	0.9%
	Sophomore	2	1.9%
	Junior	27	25.5%
	Senior	76	71.7%
Class	**Undergraduate**	100	97.1%
	Graduate	3	2.9%
Age	**≤ 20 years**	11	10.6%
	21-25 years	81	77.9%
	≥ 26 years	12	11.5%

		Freq.	Freq. %
Race**	**White**	88	80.7%
	Black or African American	9	8.3%
	American Indian or Alaska Native	0	0.0%
	Asian	0	0.0%
	Native Hawaiian or Other Pacific Islander	0	0.0%
	Other Race	12	11.0%

**The cumulative percent may exceed 100% as students are allowed to select more than one category.

		Freq.	Freq. %
Proficiency with the English Language*	**Excellent**	87	79.8%
	Very Good	19	17.4%
	Good	2	1.8%
	Fair	1	0.9%
	Poor	0	0.0%

* Self-rated

	Freq.	Freq. %
Spanish/Hispanic/Latino Ethnicity	24	22.0%
Considered English primary language?	106	97.2%

CAT Breakdown: Frequency of Points Awarded for Each Question

Sam Houston State University: August 2016 - College of Sciences

	Skill Assessed by CAT Question	Points Awarded	Freq.	Freq. %
Q1	Summarize the pattern of results in a graph without making inappropriate inferences.	**0**	34	31.2%
		1	75	68.8%
Q2	Evaluate how strongly correlational-type data supports a hypothesis.	**0**	39	35.8%
		1	28	25.7%
		2	21	19.3%
		3	21	19.3%
Q3	Provide alternative explanations for a pattern of results that has many possible causes.	**0**	38	34.9%
		1	40	36.7%
		2	23	21.1%
		3	8	7.3%
Q4	Identify additional information needed to evaluate a hypothesis.	**0**	41	37.6%
		1	28	25.7%
		2	24	22.0%
		3	8	7.3%
		4	8	7.3%
Q5	Evaluate whether spurious information strongly supports a hypothesis.	**0**	29	26.6%
		1	80	73.4%
Q6	Provide alternative explanations for spurious associations.	**0**	10	9.2%
		1	35	32.1%
		2	44	40.4%
		3	20	18.3%
Q7	Identify additional information needed to evaluate a hypothesis.	**0**	67	61.5%
		1	35	32.1%
		2	7	6.4%
Q8	Determine whether an invited inference is supported by specific information.	**0**	38	34.9%
		1	71	65.1%
Q9	Provide relevant alternative interpretations for a specific set of results.	**0**	53	49.1%
		1	44	40.7%
		2	11	10.2%
Q10	Separate relevant from irrelevant information when solving a real-world problem.	**0**	2	1.8%
		1	2	1.8%
		2	14	12.8%
		3	50	45.9%
		4	41	37.6%
Q11	Use and apply relevant information to evaluate a problem.	**0**	41	37.6%
		1	48	44.0%
		2	20	18.3%
Q12	Use basic mathematical skills to help solve a real-world problem.	**0**	22	20.2%
		1	87	79.8%
Q13	Identify suitable solutions for a real-world problem using relevant information.	**0**	40	37.0%
		1	39	36.1%
		2	15	13.9%
		3	14	13.0%
Q14	Identify and explain the best solution for a real-world problem using relevant information.	**0**	30	27.5%
		1	14	12.8%
		2	4	3.7%
		3	16	14.7%
		4	35	32.1%
		5	10	9.2%
Q15	Explain how changes in a real-world problem situation might affect the solution.	**0**	65	59.6%
		1	30	27.5%
		2	10	9.2%
		3	4	3.7%

Institutional/Departmental Profile

Sam Houston State University: August 2016 - College of Sciences

Evaluate and Interpret Info	Problem Solving	Creative Thinking	Effective Comm.		Skill Assessed by CAT Question	Institution/Department	
						Mean	Avg. % of Attainable Points
X				Q1	Summarize the pattern of results in a graph without making inappropriate inferences.	0.69	69%
X			X	Q2	Evaluate how strongly correlational-type data supports a hypothesis.	1.22	41%
		X	X	Q3	Provide alternative explanations for a pattern of results that has many possible causes.	1.01	34%
	X	X	X	Q4	Identify additional information needed to evaluate a hypothesis.	1.21	30%
X				Q5	Evaluate whether spurious information strongly supports a hypothesis.	0.73	73%
		X	X	Q6	Provide alternative explanations for spurious associations.	1.68	56%
	X	X	X	Q7	Identify additional information needed to evaluate a hypothesis.	0.45	22%
X				Q8	Determine whether an invited inference is supported by specific information.	0.65	65%
		X	X	Q9	Provide relevant alternative interpretations for a specific set of results.	0.61	31%
X	X			Q10	Separate relevant from irrelevant information when solving a real-world problem.	3.16	79%
X	X		X	Q11	Use and apply relevant information to evaluate a problem.	0.81	40%
	X			Q12	Use basic mathematical skills to help solve a real-world problem.	0.80	80%
X	X			Q13	Identify suitable solutions for a real-world problem using relevant information.	1.03	34%
X	X		X	Q14	Identify and explain the best solution for a real-world problem using relevant information.	2.38	48%
	X	X	X	Q15	Explain how changes in a real-world problem situation might affect the solution.	0.57	19%
					CAT Total Score	16.98	45%

The map of skills covered by each question above is a suggested theoretical guide for interpreting results.

Upper Division CAT Means Comparison Report

Sam Houston State University: August 2016 - College of Sciences

Evaluate and Interpret Info	Problem Solving	Creative Thinking	Effective Comm.		Skill Assessed by CAT Question	Institution	National		
						Mean	Mean	Probability of difference[a]	Effect Size[b]
X				Q1	Summarize the pattern of results in a graph without making inappropriate inferences.	0.69	0.67		
X			X	Q2	Evaluate how strongly correlational-type data supports a hypothesis.	1.22	1.21		
		X	X	Q3	Provide alternative explanations for a pattern of results that has many possible causes.	1.01	1.35	***	-.35
	X	X	X	Q4	Identify additional information needed to evaluate a hypothesis.	1.21	1.41		
X				Q5	Evaluate whether spurious information strongly supports a hypothesis.	0.73	0.73		
		X	X	Q6	Provide alternative explanations for spurious associations.	1.68	1.56		
	X	X	X	Q7	Identify additional information needed to evaluate a hypothesis.	0.45	0.82	***	-.57
X				Q8	Determine whether an invited inference is supported by specific information.	0.65	0.68		
		X	X	Q9	Provide relevant alternative interpretations for a specific set of results.	0.61	0.93	***	-.45
X	X			Q10	Separate relevant from irrelevant information when solving a real-world problem.	3.16	3.14		
X	X		X	Q11	Use and apply relevant information to evaluate a problem.	0.81	1.11	***	-.44
	X			Q12	Use basic mathematical skills to help solve a real-world problem.	0.80	0.82		
X	X			Q13	Identify suitable solutions for a real-world problem using relevant information.	1.03	1.18		
X	X		X	Q14	Identify and explain the best solution for a real-world problem using relevant information.	2.38	2.29		
	X	X	X	Q15	Explain how changes in a real-world problem situation might affect the solution.	0.57	1.15	***	-.62
					CAT Total Score	16.98	19.04	***	-.35

[a]. * p<.05 **p<.01 ***p<.001 (2 –tailed) Does not Account for entering ACT/SAT.

[b]. Mean difference divided by pooled group standard deviation.
(0.1 - 0.3 = small effect; 0.3 - 0.5 = moderate effect; >0.5 = large effect)

The map of skills covered by each question above is a suggested theoretical guide for interpreting results.