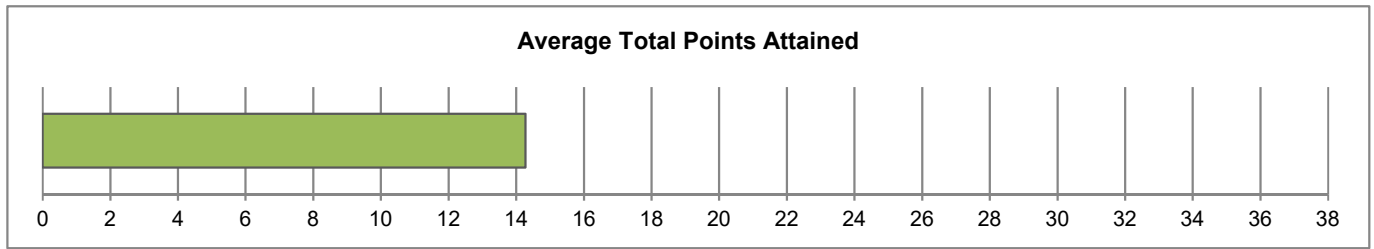# Sam Houston State University

CAT Institutional Report

Fall 2024 - All Students

CAT Overview: Descriptive Statistics for CAT Total Score
Sam Houston State University: Fall 2024 - All Students

	N	Min.	Max.	Mean	Std. Dev
CAT Total Score	394	4.00	27.00	14.27	4.62

Average Total Points Attained

	N	Min.	Max.	Mean	Std. Dev
Time Spent (in minutes)	394	10	96	38	14

CAT Demographics: Descriptive Statistics for Sample

		Freq.	Freq. %
Gender	**Male**	210	54.0%
	Female	179	46.0%
Class Standing	**Freshman**	0	0.0%
	Sophomore	10	2.6%
	Junior	111	28.4%
	Senior	270	69.1%
Class	**Undergraduate**	391	99.2%
	Graduate	3	0.8%
Age	**≤ 20 years**	103	27.7%
	21-25 years	241	64.8%
	≥ 26 years	28	7.5%

		Freq.	Freq. %
Race**	**White**	276	70.1%
	Black or African American	65	16.5%
	American Indian or Alaska Native	8	2.0%
	Asian	29	7.4%
	Native Hawaiian or Other Pacific Islander	1	0.3%
	Other Race	35	8.9%

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

		Freq.	Freq. %
Proficiency with the English Language*	**Excellent**	307	77.9%
	Very Good	72	18.3%
	Good	13	3.3%
	Fair	2	0.5%
	Poor	0	0.0%

* Self-rated

	Freq.	Freq. %
Spanish/Hispanic/Latino Ethnicity	120	30.5%
Considered English primary language?	373	94.7%

CAT Breakdown: Frequency of Points Awarded for Each Question
Sam Houston State University: Fall 2024 - All Students

	Skill Assessed by CAT Question	Points Awarded	Freq.	Institution
Q1	Summarize the pattern of results in a graph without making inappropriate inferences.	0	74	18.8%
		1	320	81.2%
Q2	Evaluate how strongly correlational-type data supports a hypothesis.	0	137	34.8%
		1	144	36.5%
		2	51	12.9%
		3	62	15.7%
Q3	Provide alternative explanations for a pattern of results that has many possible causes.	0	194	49.2%
		1	106	26.9%
		2	78	19.8%
		3	16	4.1%
Q4	Identify additional information needed to evaluate a hypothesis.	0	237	60.2%
		1	130	33.0%
		2	26	6.6%
		3	1	0.3%
		4	0	0.0%
Q5	Evaluate whether spurious information strongly supports a hypothesis.	0	136	34.5%
		1	258	65.5%
Q6	Provide alternative explanations for spurious associations.	0	62	15.7%
		1	124	31.5%
		2	173	43.9%
		3	35	8.9%
Q7	Identify additional information needed to evaluate a hypothesis.	0	361	91.6%
		1	32	8.1%
		2	1	0.3%
Q8	Determine whether an invited inference is supported by specific information.	0	182	46.2%
		1	212	53.8%
Q9	Provide relevant alternative interpretations for a specific set of results.	0	157	39.8%
		1	229	58.1%
		2	8	2.0%
Q10	Separate relevant from irrelevant information when solving a real-world problem.	0	1	0.3%
		1	11	2.8%
		2	59	15.0%
		3	168	42.7%
		4	154	39.2%
Q11	Use and apply relevant information to evaluate a problem.	0	108	27.4%
		1	269	68.3%
		2	17	4.3%
Q12	Use basic mathematical skills to help solve a real-world problem.	0	91	23.2%
		1	302	76.8%
Q13	Identify suitable solutions for a real-world problem using relevant information.	0	121	30.8%
		1	180	45.8%
		2	62	15.8%
		3	30	7.6%
Q14	Identify and explain the best solution for a real-world problem using relevant information.	0	156	39.6%
		1	66	16.8%
		2	7	1.8%
		3	49	12.4%
		4	96	24.4%
		5	20	5.1%
Q15	Explain how changes in a real-world problem situation might affect the solution.	0	329	83.5%
		1	41	10.4%
		2	19	4.8%
		3	5	1.3%

Institutional/Departmental Profile

Sam Houston State University: Fall 2024 - All Students

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.	0.81	81%
X			X	Q2	Evaluate how strongly correlational-type data supports a hypothesis.	1.10	37%
		X	X	Q3	Provide alternative explanations for a pattern of results that has many possible causes.	0.79	26%
	X	X	X	Q4	Identify additional information needed to evaluate a hypothesis.	0.47	12%
X				Q5	Evaluate whether spurious information strongly supports a hypothesis.	0.65	65%
		X	X	Q6	Provide alternative explanations for spurious associations.	1.46	49%
	X	X	X	Q7	Identify additional information needed to evaluate a hypothesis.	0.09	4%
X				Q8	Determine whether an invited inference is supported by specific information.	0.54	54%
		X	X	Q9	Provide relevant alternative interpretations for a specific set of results.	0.62	31%
X	X			Q10	Separate relevant from irrelevant information when solving a real-world problem.	3.18	79%
X	X		X	Q11	Use and apply relevant information to evaluate a problem.	0.77	38%
	X			Q12	Use basic mathematical skills to help solve a real-world problem.	0.77	77%
X	X			Q13	Identify suitable solutions for a real-world problem using relevant information.	1.00	33%
X	X		X	Q14	Identify and explain the best solution for a real-world problem using relevant information.	1.80	36%
	X	X	X	Q15	Explain how changes in a real-world problem situation might affect the solution.	0.24	8%
					CAT Total Score	14.27	38%

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

Senior CAT Means Comparison Report
Sam Houston State University: Fall 2024 - All Students

Evaluate and Interpret Info	Problem Solving	Creative Thinking	Effective Comm.		Skill Assessed by CAT Question	Institution Mean	National[a] Mean	National[a] Probability of difference[b]	National[a] Effect Size[c]
X				Q1	Summarize the pattern of results in a graph without making inappropriate inferences.	0.81	0.70	***	+.27
X			X	Q2	Evaluate how strongly correlational-type data supports a hypothesis.	1.10	1.20		
		X	X	Q3	Provide alternative explanations for a pattern of results that has many possible causes.	0.79	1.15	***	-.37
	X	X	X	Q4	Identify additional information needed to evaluate a hypothesis.	0.47	1.10	***	-.68
X				Q5	Evaluate whether spurious information strongly supports a hypothesis.	0.65	0.75	***	-.21
		X	X	Q6	Provide alternative explanations for spurious associations.	1.46	1.53		
	X	X	X	Q7	Identify additional information needed to evaluate a hypothesis.	0.09	0.56	***	-.96
X				Q8	Determine whether an invited inference is supported by specific information.	0.54	0.66	***	-.25
		X	X	Q9	Provide relevant alternative interpretations for a specific set of results.	0.62	0.85	***	-.36
X	X			Q10	Separate relevant from irrelevant information when solving a real-world problem.	3.18	3.13		
X	X		X	Q11	Use and apply relevant information to evaluate a problem.	0.77	0.95	***	-.31
	X			Q12	Use basic mathematical skills to help solve a real-world problem.	0.77	0.82	*	-.12
X	X			Q13	Identify suitable solutions for a real-world problem using relevant information.	1.00	1.10		
X	X		X	Q14	Identify and explain the best solution for a real-world problem using relevant information.	1.80	2.24	***	-.23
	X	X	X	Q15	Explain how changes in a real-world problem situation might affect the solution.	0.24	0.92	***	-.82
					CAT Total Score	14.27	17.64	***	-.62

[a.] National user norms updated Fall 2019

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

[c.] 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.

CAT Breakdown: Frequency of Points Awarded for Each Question
## Sam Houston State University: Fall 2024 - All Students

	Skill Assessed by CAT Question	Points Awarded	Freq.	Institution
Q1	Summarize the pattern of results in a graph without making inappropriate inferences.	0	74	18.8%
		1	320	81.2%
Q2	Evaluate how strongly correlational-type data supports a hypothesis.	0	137	34.8%
		1	144	36.5%
		2	51	12.9%
		3	62	15.7%
Q3	Provide alternative explanations for a pattern of results that has many possible causes.	0	194	49.2%
		1	106	26.9%
		2	78	19.8%
		3	16	4.1%
Q4	Identify additional information needed to evaluate a hypothesis.	0	237	60.2%
		1	130	33.0%
		2	26	6.6%
		3	1	0.3%
		4	0	0.0%
Q5	Evaluate whether spurious information strongly supports a hypothesis.	0	136	34.5%
		1	258	65.5%
Q6	Provide alternative explanations for spurious associations.	0	62	15.7%
		1	124	31.5%
		2	173	43.9%
		3	35	8.9%
Q7	Identify additional information needed to evaluate a hypothesis.	0	361	91.6%
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Q8	Determine whether an invited inference is supported by specific information.	0	182	46.2%
		1	212	53.8%
Q9	Provide relevant alternative interpretations for a specific set of results.	0	157	39.8%
		1	229	58.1%
		2	8	2.0%
Q10	Separate relevant from irrelevant information when solving a real-world problem.	0	1	0.3%
		1	11	2.8%
		2	59	15.0%
		3	168	42.7%
		4	154	39.2%
Q11	Use and apply relevant information to evaluate a problem.	0	108	27.4%
		1	269	68.3%
		2	17	4.3%
Q12	Use basic mathematical skills to help solve a real-world problem.	0	91	23.2%
		1	302	76.8%
Q13	Identify suitable solutions for a real-world problem using relevant information.	0	121	30.8%
		1	180	45.8%
		2	62	15.8%
		3	30	7.6%
Q14	Identify and explain the best solution for a real-world problem using relevant information.	0	156	39.6%
		1	66	16.8%
		2	7	1.8%
		3	49	12.4%
		4	96	24.4%
		5	20	5.1%
Q15	Explain how changes in a real-world problem situation might affect the solution.	0	329	83.5%
		1	41	10.4%
		2	19	4.8%
		3	5	1.3%

Senior Norm

30.2%
69.8%
33.4%
31.9%
16.2%
18.5%
35.5%
26.9%
24.9%
12.7%
40.5%
27.0%
18.9%
8.8%
4.8%
25.1%
74.9%
12.6%
33.0%
43.3%
11.0%
51.9%
40.5%
4.6%
33.8%
66.2%
34.5%
46.2%
19.2%
2.0%
4.2%
14.2%
38.3%
41.2%
26.1%
52.4%
21.6%
18.3%
81.7%
32.7%
37.9%
16.2%
13.1%
32.1%
14.2%
1.9%
11.8%
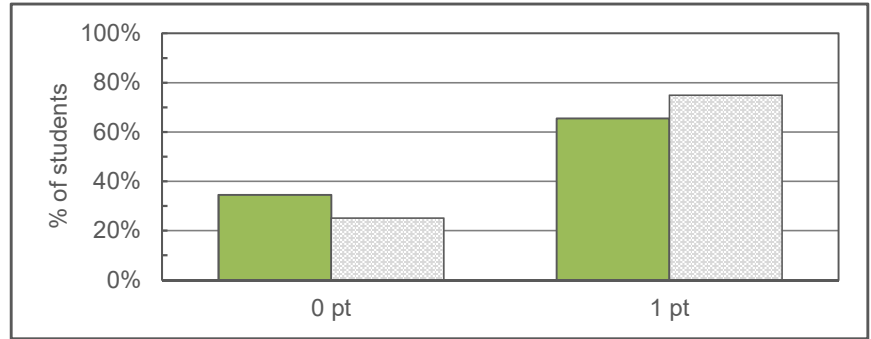29.7%
10.2%
45.7%
26.0%
18.8%
9.5%

Frequency of Points Awarded on the CAT
Sam Houston State University: Fall 2024 - All Students

Questions 1-4 present students with a scenario and graph. In this section of questions, students will be asked to summarize the trend of the graph, evaluate the strength of the graph in supporting an argument, provide potential alterniatve explantions for the trend of the graph, and indentify additional information that would be useful to more fully understand the situation. This set of questions aligns with CAT App Skill Set 1.

Legend

Institution | Senior Norm
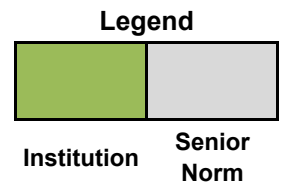
Q1 Summarize the pattern of results in a graph without making inappropriate inferences.

A point is awarded for responses that describe the trend in the graph AND do not attribute the findings to a single cause when there are a variety of potential explanations.
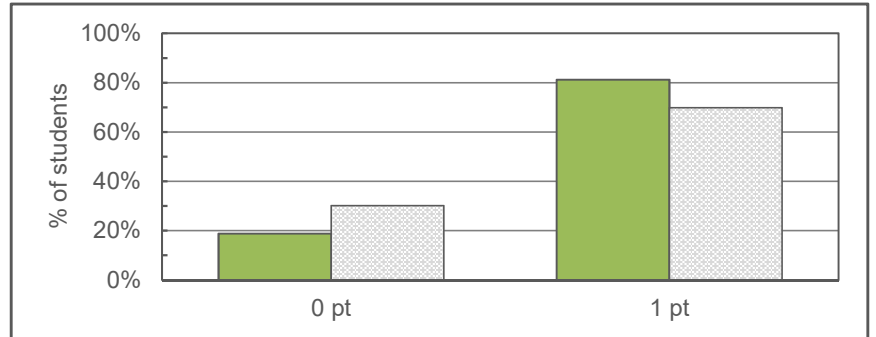
Q2 Evaluate how strongly correlational-type data supports a hypothesis.

Points are awarded for responses that explain the limitations of the correlation observed and the possibility of alternative explanations.
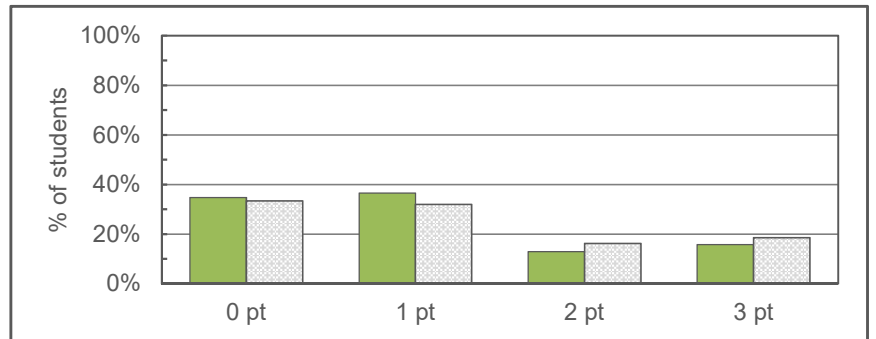
Q3 Provide alternative explanations for a pattern of results that has many possible causes.

Points are awarded for the number of viable alternative explanations provided for the reported findings.
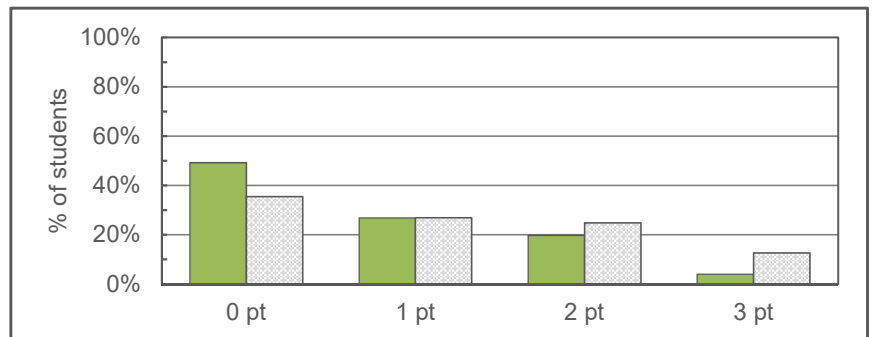
Q4 Identify additional information needed to evaluate a hypothesis.

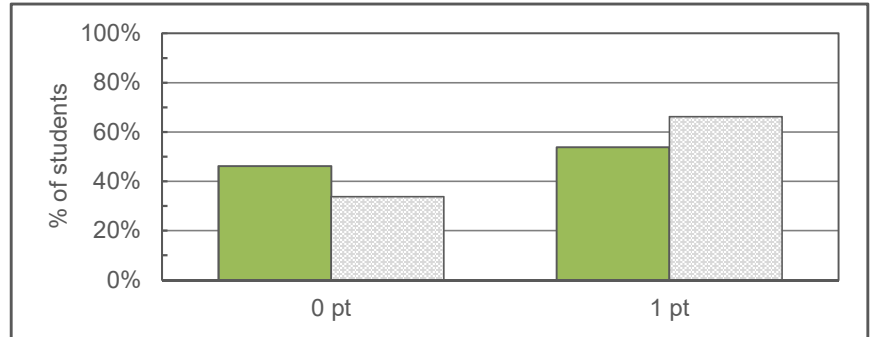Points are awarded for clearly identifying types of information needed to evaluate competing hypotheses.
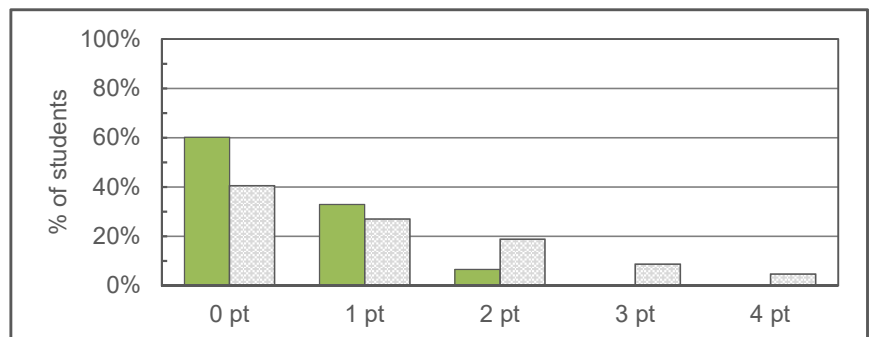
Frequency of Points Awarded on the CAT
Sam Houston State University: Fall 2024 - All Students

Questions 5-7 present students with a hypothesis and two pieces of evidence. In this section of questions, students will be asked to evaluate the strength of the evidence in supporting a hypothesis, provide potential alternative explantions for the evidence, and identify additional information that would be useful to more fully evaluate the hypothesis. This set of questions aligns with CAT App Skill Set 1.

Legend

| Institution | Senior Norm |
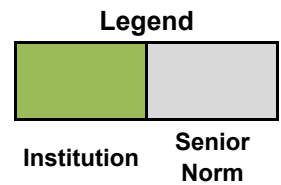
Q5 Evaluate whether spurious information strongly supports a hypothesis.

A point is awarded for recognizing that spurious information does not strongly support a hypothesis.

Q6 Provide alternative explanations for spurious associations.

Points are awarded for explaining the spurious nature of the evidence.
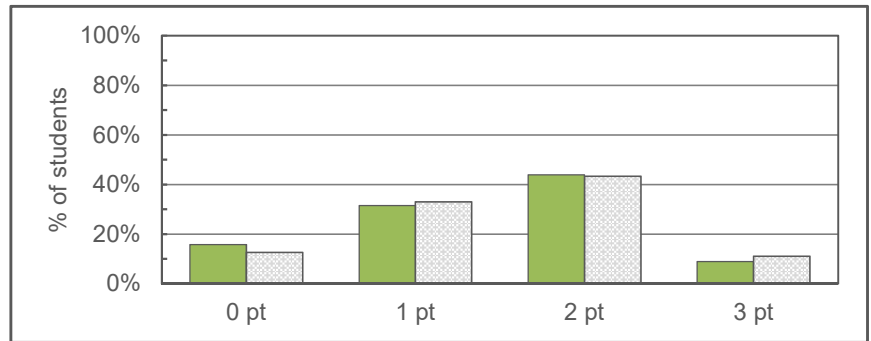
Q7 Identify additional information needed to evaluate a hypothesis.

Points are awarded for clearly identifying new information that needs to be obtained to evaluate the hypothesis.
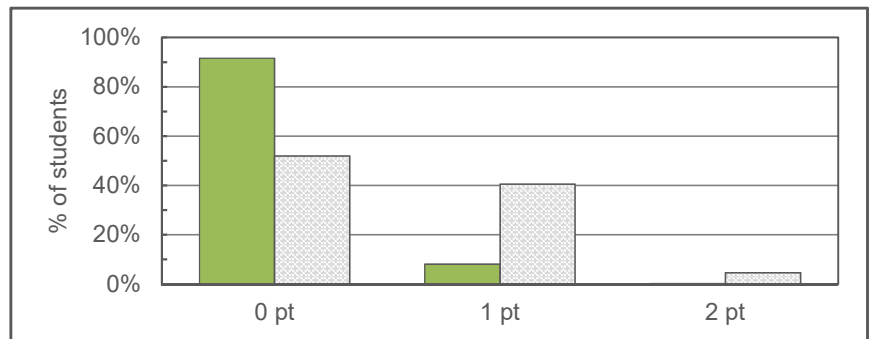
Frequency of Points Awarded on the CAT
Sam Houston State University: Fall 2024 - All Students

Questions 8-9 present students with the results of a survey and a corresponding marketing claim.In this section of questions, students will be asked to evaluate whether the marketing claim is supported by the results of the survey and to provide potential alternative explantions for the results of the survey. This set of questions aligns with CAT App Skill Set 1.

Legend

Institution | Senior Norm
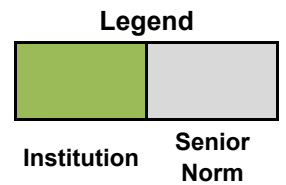
Q8 Determine whether an invited inference is supported by specific information.

A point is awarded for indicating the provided evidence does not strongly support the hypothesis.

Q9 Provide relevant alternative interpretations for a specific set of results.

Points are awarded for providing alternative interpretations of the findings.
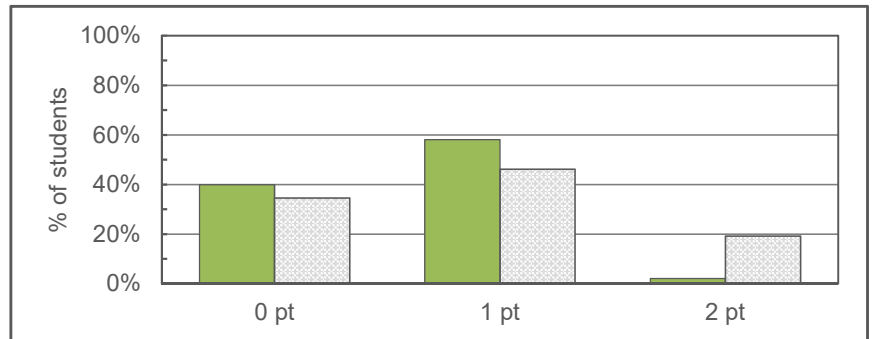
Frequency of Points Awarded on the CAT
Sam Houston State University: Fall 2024 - All Students

Questions 10-15 present students with a real-world problem-solving task. In this section of questions, students will be asked to evaluate the relevance of avaliable information, read relevant information, evaluate a suggested solution based on relevant information, solve a basic mathematical problem needed to solve the problem, identify a group of appropriate solutions, identify the best solution for a the problem situation, and identify changes to the problem situation that would change the solution. This set of questions aligns with CAT App Skill Set 2.
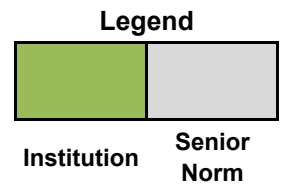
Q10 Separate relevant from irrelevant information when solving a real-world problem.

Points are awarded for correctly identifying information relevant to solving the problem based on the descriptive titles of the avaliable information.
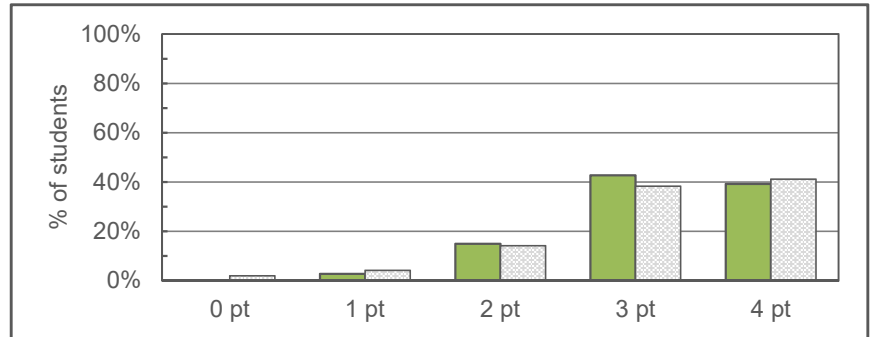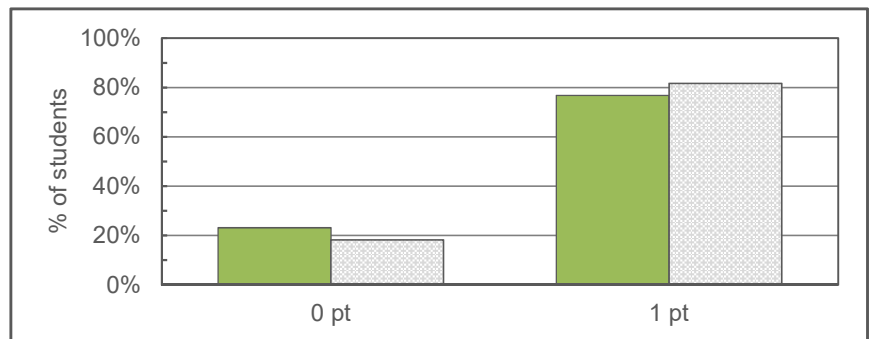

Q11 Use and apply relevant information to evaluate a problem.

Points are awarded for applying relevant information from the additional information to the problem.
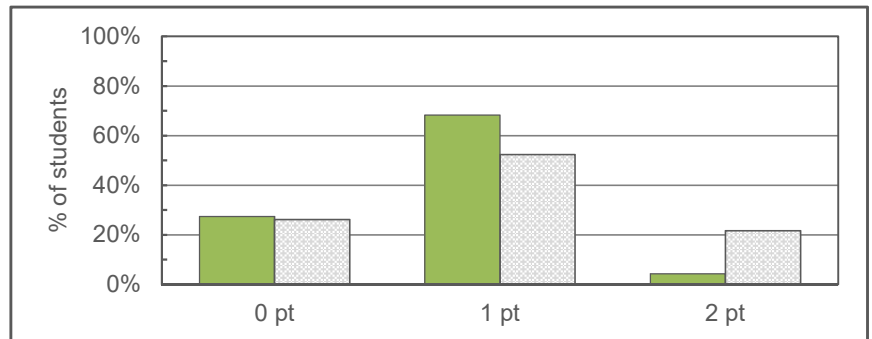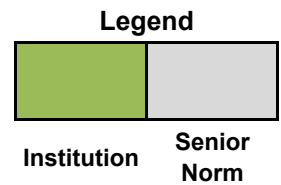

Q12 Use basic mathematical skills to help solve a real-world problem.

A points is awarded for performing a basic mathematical calculation needed to help solve a real-world problem.

Frequency of Points Awarded on the CAT
Sam Houston State University: Fall 2024 - All Students

Questions 10-15 present students with a real-world problem-solving task. In this section of questions, students will be asked to evaluate the relevance of avaliable information, read relevant information, evaluate a suggested solution based on relevant information, solve a basic mathematical problem needed to solve the problem, identify a group of appropriate solutions, identify the best solution for a the problem situation, and identify changes to the problem situation that would change the solution. This set of questions aligns with CAT App Skill Set 2.

Legend

Institution | Senior Norm

Q13 Identify suitable solutions for a real-world problem using relevant information.

Points are awarded for identifying viable solutions that could solve a real-world problem.
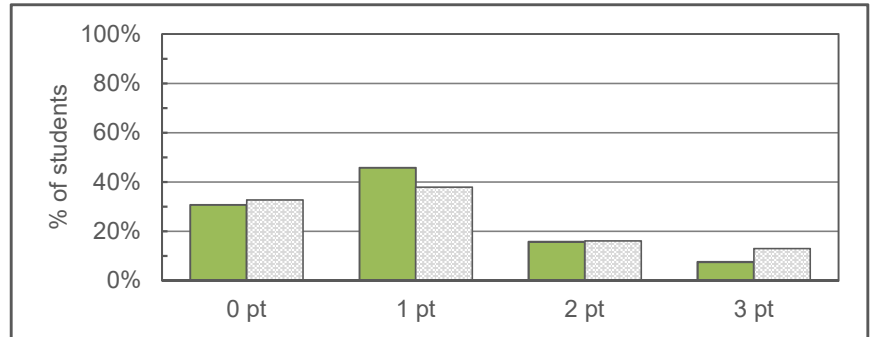
Q14 Identify and explain the best solution for a real-world problem using relevant information.

Points are awarded for identify and explaining the best solution to a real-world problem.
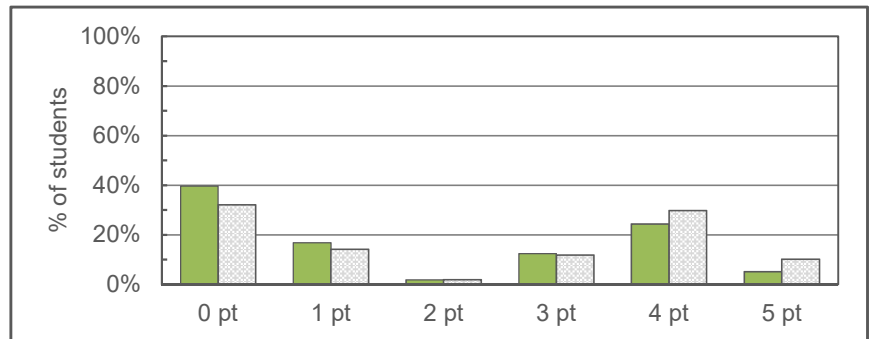
Q15 Explain how changes in a real-world problem situation might affect the solution.

Points are awarded for identifying a number of changes to the real-world problem situation and explaining how the opitmal solution would change.