### Answer Key for AP Calculus AB Practice Exam, Section I

Question 1: D	Question 24: C
Question 2: B	Question 25: D
Question 3: C	Question 26: C
Question 4: B	Question 27: C
Question 5: A	Question 28: B
Question 6: B	Question 29: A
Question 7: D	Question 30: B
Question 8: A	Question 76: D
Question 9: D	Question 77: B
Question 10: A	Question 78: C
Question 11: A	Question 79: B
Question 12: D	Question 80: A
Question 13: D	Question 81: D
Question 14: B	Question 82: D
Question 15: C	Question 83: C
Question 16: A	Question 84: D
Question 17: A	Question 85: B
Question 18: D	Question 86: C
Question 19: C	Question 87: B
Question 20: C	Question 88: C
Question 21: A	Question 89: A
Question 22: B	Question 90: C
Question 23: A	

# 2017 AP Calculus AB Question Descriptors and Performance Data

### **Multiple-Choice Questions**

Question	Learning Objective	Essential Knowledge	Mathematical Practice for AP Calculus 1	Mathematical Practice for AP Calculus 2	Key	% Correct
1	2.1C	2.1C4	Implementing algebraic/computational processes	Building notational fluency	D	91
2	3.3B(a)	3.3B3	Implementing algebraic/computational processes	Building notational fluency	В	63
3	2.1C	2.1C3	Implementing algebraic/computational processes	Building notational fluency	С	80
4	3.2B	3.2B2	Connecting multiple representations	Connecting concepts	В	68
5	2.1C	2.1C4	Implementing algebraic/computational processes	Building notational fluency	А	76
6	2.1A	2.1A1	Implementing algebraic/computational processes	Connecting concepts	В	57
7	3.2C	3.2C2	Reasoning with definitions and theorems	Building notational fluency	D	69
8	2.3B	2.3B1	Implementing algebraic/computational processes	Connecting concepts	А	68
9	3.2C	3.2C1	Connecting multiple representations	Connecting concepts	D	84
10	3.3B(b)	3.3B5	Implementing algebraic/computational processes	Building notational fluency	А	42
11	2.1C	2.1C5	Implementing algebraic/computational processes	Building notational fluency	А	61
12	2.3D	2.3D1	Connecting concepts	Implementing algebraic/computational processes	D	80
13	2.3F	2.3F1	Connecting multiple representations	Connecting concepts	D	52
14	3.5A	3.5A1	Connecting concepts	Building notational fluency	В	18
15	1.1A(b)	1.1A3	Connecting multiple representations	Connecting concepts	С	41
16	2.2A	2.2A1	Implementing algebraic/computational processes	Connecting concepts	А	60
17	2.3C	2.3C1	Implementing algebraic/computational processes	Connecting concepts	А	42
18	3.3A	3.3A2	Reasoning with definitions and theorems	Connecting concepts	D	68
19	2.3B	2.3B2	Implementing algebraic/computational processes	Connecting concepts	С	57
20	1.2A	1.2A3	Reasoning with definitions and theorems	Connecting concepts	С	24
21	2.1A	2.1A2	Connecting concepts	Building notational fluency	Α	47
22	3.5A	3.5A2	Implementing algebraic/computational processes	Connecting concepts	В	39
23	3.4D	3.4D2	Connecting concepts	Building notational fluency	А	42
24	3.4B	3.4B1	Connecting concepts	Implementing algebraic/computational processes	С	44
25	2.1C	2.1C3	Connecting multiple representations	Implementing algebraic/computational processes	D	60
26	1.1C	1.1C3	Implementing algebraic/computational processes	Reasoning with definitions and theorems	С	30
27	2.2A	2.2A3	Connecting multiple representations	Connecting concepts	С	61
28	2.3C	2.3C2	Implementing algebraic/computational processes	Connecting concepts	В	46
29	1.1D	1.1D1	Building notational fluency	Connecting concepts	А	30
30	3.2A(a)	3.2A2	Implementing algebraic/computational processes	Reasoning with definitions and theorems	В	21

# 2017 AP Calculus AB Question Descriptors and Performance Data

Question	Learning Objective	Essential Knowledge	Mathematical Practice for AP Calculus 1	Mathematical Practice for AP Calculus 2	Key	% Correct
76	2.2A	2.2A2	Connecting multiple representations	Connecting concepts	D	81
77	3.3B(b)	3.3B2	Implementing algebraic/computational processes	Reasoning with definitions and theorems	В	55
78	1.1D	1.1D1	Building notational fluency	Connecting concepts	С	63
79	2.3A	2.3A2	Connecting concepts	Building notational fluency	В	67
80	2.2A	2.2A1	Implementing algebraic/computational processes	Connecting concepts	А	65
81	2.2A	2.2A3	Connecting multiple representations	Connecting concepts	D	49
82	3.4C	3.4C1	Implementing algebraic/computational processes	Connecting concepts	D	42
83	2.2A	2.2A1	Implementing algebraic/computational processes	Connecting concepts	С	72
84	3.4E	3.4E1	Connecting concepts	Building notational fluency	D	89
85	2.4A	2.4A1	Reasoning with definitions and theorems	Connecting concepts	В	63
86	2.2A	2.2A1	Connecting concepts	Connecting multiple representations	С	44
87	2.2A	2.2A2	Connecting multiple representations	Connecting concepts	В	44
88	2.3B	2.3B1	Implementing algebraic/computational processes	Connecting concepts	С	61
89	3.4B	3.4B1	Reasoning with definitions and theorems	Connecting concepts	А	37
90	1.2A	1.2A1	Reasoning with definitions and theorems	Connecting concepts	С	54

### **Free-Response Questions**

Question	Learning Objective	Essential Knowledge	Mathematical Practice for AP Calculus	Mean
1	1.2B 2.3C 3.4C	1.2B1 2.3C1 3.4C1	Reasoning with definitions and theorems Connecting concepts Implementing algebraic/computational processes Building notational fluency Communicating	3.04
2	2.3D 3.2C 3.4A 3.4D	2.3D1 3.2C2 3.4A2 3.4D1	Reasoning with definitions and theorems Connecting concepts Implementing algebraic/computational processes Connecting multiple representations Building notational fluency Communicating	3.01
3	2.1A 2.2A 3.2C 3.3A	2.1A1 2.2A1 3.2C1 3.3A2,3.3A3	Reasoning with definitions and theorems Connecting concepts Implementing algebraic/computational processes Connecting multiple representations Building notational fluency Communicating	3.49
4	1.1C 2.1C 3.2B 3.3B(b)	1.1C3 2.1C2 3.2B2 3.3B2	Reasoning with definitions and theorems Connecting concepts Implementing algebraic/computational processes Connecting multiple representations Building notational fluency Communicating	2.44
5	3.3B(b) 3.4D	3.3B2,3.3B5 3.4D1,3.4D2	Reasoning with definitions and theorems Connecting concepts Implementing algebraic/computational processes Connecting multiple representations Building notational fluency Communicating	4.46
6	2.1C 2.3A 2.3C 3.1A 3.3B(b) 3.4A	2.1C2,2.1C4 2.3A1 2.3C2 3.1A2  3.3B2 3.4A2	Reasoning with definitions and theorems Connecting concepts Implementing algebraic/computational processes Building notational fluency Communicating	5.39