

# AB & BC CALCULUS FR QUESTIONS BY TYPE

| Exam Year | Type |        |           |      |     |       |        |      |        |       |        |
|-----------|------|--------|-----------|------|-----|-------|--------|------|--------|-------|--------|
|           | 1    | 2      | 3g        | 3a   | 4   | 5     | 6      | 7    | 8      | 9     | 10     |
|           | Rate | Motion | Graph     |      | A-V | Table | Dif Eq | Misc | Vector | Polar | Series |
| 1998 AB   | 5    |        | 3         | 2    | 1*  | 3     | 4*     | 6    |        |       |        |
| 1998 BC   | 5    |        | 6         | 2    | 1*  |       | 4*     |      |        |       | 3      |
| 1999 AB   |      | 1      | 5         | 4    | 2   | 3     |        | 6    |        |       |        |
| 1999 BC   |      |        | 5         |      | 2   | 3     | 6      |      | 1      |       | 4      |
| 2000 AB   | 4    | 2      | 2, 3      |      | 1   |       | 6*     | 5    |        |       |        |
| 2000 BC   |      | 2, 4   | 2         |      | 1   |       | 6*     | 5    | 4      |       | 3, 6   |
| 2001 AB   |      | 3      | 3         | 4, 5 | 1   | 2     | 6      | 6    | 1      |       |        |
| 2001 BC   |      | 3      | 3         | 4    |     | 2     | 5      | 5    | 1      |       | 6      |
| 2002 AB   | 2    | 3*     | 4         |      | 1   | 6     |        | 5    |        |       |        |
| 2002 BC   | 2    | 3*     | 4         |      | 1   |       | 5      |      | 3      |       | 6      |
| 2003 AB   | 3    | 2      | 3, 4      | 6    | 1   | 3     |        | 5    |        |       |        |
| 2003 BC   |      |        | 4         |      | 1   |       |        | 5    | 2      | 3     | 6      |
| 2004 AB   | 1    | 3      | 5         | 3    | 2   | 3     | 6      | 4    | 3      |       |        |
| 2004 BC   | 1    |        |           |      | 2   | 3     | 5      | 4    | 3      |       | 6      |
| 2005 AB   | 2    | 5      | 5         |      | 1   | 3, 4  | 6      |      |        |       |        |
| 2005 BC   | 2    | 5      | 5         |      | 1   | 3     | 4      |      |        | 2     | 6      |
| 2006 AB   | 2    | 4      | 3         | 6    | 1   | 4     | 5*     |      |        |       |        |
| 2006 BC   | 2    |        |           |      | 1   | 4     | 5*     |      | 3      |       | 6      |
| 2007 AB   | 2    | 4      | 2         | 6    | 1   | 3, 5  | 4      |      |        |       |        |
| 2007 BC   | 2    |        |           | 4    | 1   | 5     |        |      |        | 3     | 6      |
| 2008 AB   |      | 4      | 4         | 6    | 1   | 2     | 5      | 3    |        |       |        |
| 2008 BC   |      | 4      | 4         | 5    | 1   | 2, 3  | 6      |      |        |       | 3, 6   |
| 2009 AB   | 2, 3 | 1      | 1, 6      |      | 4   | 5     |        |      |        |       |        |
| 2009 BC   | 2    | 1      |           |      |     | 5     | 4      |      | 3      |       | 6      |
| 2010 AB   | 1, 3 |        | 3, 5      |      | 4   | 2     | 6      |      |        |       |        |
| 2010 BC   | 1    |        |           |      | 4   | 2     | 5      |      | 3      |       | 6      |
| 2011 AB   |      | 1      | 4         | 6    | 3*  | 2     | 5      |      |        |       |        |
| 2011 BC   |      |        | 4         |      | 3*  | 2     | 5      |      | 1      |       | 6      |
| 2012 AB   |      | 6      | 3         | 4    | 2   | 1     | 5      |      |        |       |        |
| 2012 BC   |      |        | 3         |      |     | 1, 4  | 5, 4   |      | 2      |       | 4, 6   |
| 2013 AB   | 1    | 2      | 4         |      | 5   | 3     | 6      |      |        |       |        |
| 2013 BC   | 1    |        | 4         |      |     | 3     | 5      |      |        | 2     | 6      |
| 2014 AB   | 1    |        | 3         |      | 2   | 4, 5  | 6      | 4    |        |       |        |
| 2014 BC   | 1    |        | 3         |      | 5   | 4     |        |      |        | 2     | 6      |
| 2015 AB   | 1    |        | 5         |      | 2   | 3     | 4      | 6    |        |       |        |
| 2015 BC   | 1    |        |           |      |     | 3     | 4      | 5    | 2      |       | 6      |
| 2016 AB   | 1    | 2      | 3         |      | 5   | 1, 6  | 4*     | 5, 6 |        |       |        |
| 2016 BC   | 1    |        | 3         |      | 5   | 1     | 4*     | 5    | 2      |       | 6      |
|           | Rate | Motion | Graph g/a |      | A-V | Table | Dif Eq | Misc | Vector | Polar | Series |

\* Indicates these were not common questions.      3g = graph stem; 3a = analytic stem.

## AB & BC CALCULUS FR QUESTIONS BY TYPE

| Exam<br>Year | Type |        |           |    |     |       |        |         |        |       |         |
|--------------|------|--------|-----------|----|-----|-------|--------|---------|--------|-------|---------|
|              | 1    | 2      | 3g        | 3a | 4   | 5     | 6      | 7       | 8      | 9     | 10      |
|              | Rate | Motion | Graph     |    | A-V | Table | Dif Eq | Misc    | Vector | Polar | Series  |
| 2017 AB      | 2    | 5      | 3         |    |     | 1     | 4      | 1, 6    |        |       |         |
| 2017 BC      |      |        | 3         | 5  |     | 1     | 4      | 1       |        | 2     | 5, 6    |
| Int 17 AB    | 2    | 1      | 3         |    | 5   | 3     |        | 6       |        |       |         |
| Int 17 BC    | 2    |        | 3         | 5b |     | 4     |        | 5a      | 1      |       | 5c,d, 6 |
| 2018 AB      | 1    | 2      | 3         | 5  |     | 4     | 6      | 4d      |        |       |         |
| 2018 BC      | 1    |        | 3         | 5  |     | 4     |        | 2,4d,5c | 2d     | 5     | 6       |
| Int 18 AB    | 1    | 2      | 3         | 6  | 4   | 1     | 5      | 6       |        |       |         |
| Int 18 BC    | 1    |        | 3         | 4  |     | 1, 6  | 5      |         | 2      |       | 6       |
| 2019 AB      | 1    | 2      | 3         | 6  | 5   | 2     | 4      | 4, 6    |        |       |         |
| 2019 BC      | 1    |        | 3         | 5  |     |       | 4      |         |        | 2     | 6       |
| 2021 AB      |      | 2      | 4         | 5  | 3   | 1     | 6      | 5       |        |       |         |
| 2021 BC      |      |        | 4         |    | 3   | 1     |        | 5       | 2      |       | 6       |
| 2022 AB      | 1    | 6      | 3         |    | 2   | 4     | 5      |         |        |       |         |
| 2022 BC      | 1    |        | 3         |    | 5   | 4     |        |         | 2      |       | 6       |
| 2023 AB      | 1    | 2      | 4         |    |     | 1, 5  | 3      | 6       |        |       |         |
| 2023 BC      | 1    |        | 4         |    | 5   | 1     | 3      |         | 2      |       | 6       |
| 2024 AB      | 1    | 2      | 4         | 5  | 6   | 1     | 3      | 5       |        |       |         |
| 2024 BC      | 1    |        | 4         |    |     | 1, 5  | 3, 5   | 5       | 2      |       | 6       |
|              | Rate | Motion | Graph g/a |    | A-V | Table | Dif Eq | Misc    | Vector | Polar | Series  |

\* Indicates these were not common questions.      3g = graph stem; 3a = analytic stem.

Int = International exam; others are the Main USA (operational) exam.

### AB AND BC MULTIPLE-CHOICE BY TYPE – NOT SECURE

| Type                                                         | 2003 AB                                                              | 2003 BC                    | 2008 AB                                          | 2008 BC                              | 2012 AB                                                      | 2012 BC                                               |
|--------------------------------------------------------------|----------------------------------------------------------------------|----------------------------|--------------------------------------------------|--------------------------------------|--------------------------------------------------------------|-------------------------------------------------------|
| 1. Rate/Accumulation                                         | 82, 84                                                               | 80, 82, 87                 | 81                                               | 77                                   | 8, 81, 89                                                    | 8,                                                    |
| 2. Linear motion                                             | 25, 76, 83, 91                                                       | 87, 91                     | 7, 82, 87                                        | 85, 87                               | 6, 16, 28, 79, 83, 89                                        | 2, 89                                                 |
| 3. Graph analysis<br>(Graph stem or analytic stem)           | 3, 7, 10, 13, 15, 17, 19, 20, 21, 22, 24, 28, 77, 81, 87, 88, 89, 92 | 13, 18, 19, 76, 86, 88, 90 | 6, 9, 10, 11, 14, 17, 18, 20, 21, 24, 25, 80, 84 | 6, 9, 14, 21, 25, 76, 78, 80, 91, 92 | 2, 5, 15, 17, 21, 22, 24, 26, 76, 78, 80, 83, 82, 84, 85, 87 | 3, 11, 12, 15, 12, 18, 21, 76, 78, 80, 81, 84, 88, 89 |
| 4. Area /volume                                              | 86                                                                   | 89                         | 83                                               | 11, 83                               | 10, 92,                                                      | 87                                                    |
| 5. Table & Riemann Sum                                       | 18, 85, 90                                                           | 25, 79, 83, 85             | 10, 14, 85, 86, 90                               | 8, 14, 22, 88, 90                    | 8, 86, 91,                                                   | 8, 81, 86                                             |
| 6. Differential Equations<br>(includes slope field)          | 12, 19                                                               | 5, 12, 14, 21              | 22, 23, 27                                       | 7, 24, 27, 86                        | 23, 25                                                       | 12, 14, 16, 23,                                       |
| 7. Other: Implicit, RR, families, roc, avg, theorems, et al. | 78, 80                                                               | 15, 78, 92                 | 6, 14, 88, 89, 92                                | 6, 10, 14, 89                        | 27, 77, 88                                                   | 4, 7, 11, 12, 77, 82, 85, 92                          |
| 8. Parametric                                                |                                                                      | 4, 7, 17, 84               |                                                  | 1, 5, 28                             |                                                              | 2                                                     |
| 9. Polar                                                     |                                                                      |                            |                                                  | 26                                   |                                                              | 26, 91                                                |
| 10. Sequences and Series                                     |                                                                      | 10, 11, 20, 22, 24, 28, 77 |                                                  | 4, 12, 16, 20, 23, 79, 82, 84        |                                                              | 5, 9, 13, 17, 22, 27, 79, 90,                         |
| 11. Limits & Continuity                                      | 3, 6, 79                                                             | 2, 81                      | 1, 5, 19, 25                                     | 3, 25, 78                            | 5, 9, 11, 21, 77                                             | 11, 21, 28, 83,                                       |
| 12. Compute Derivative<br>( <u>inverse</u> )                 | 1, 4, 9, 14, 16, 23, 26, <u>27</u>                                   | 1, 9, 16, 27, 79           | 3, 8, 12, 13, 16, 18, 26, <u>28</u>              | 1, 10, 15, 17, 18, 90, 92            | 1, 4, 7, 14, 18, 19, <u>20</u> , 27, 78                      | 1, 7, 17, 19, 26, 77, 92                              |
| 13. Compute Integral                                         | 2, 5, 8, 11, 22                                                      | 3, 6, 8, 23, 26            | 2, 4, 15, 79, 81, 85, 91                         | 13, 19, 22, 81                       | 3, 12, 13, 17, 90                                            | 3, 6, 10, 16, 18, 20, 24, 25                          |
| Type                                                         | 2003 AB                                                              | 2003 BC                    | 2008 AB                                          | 2008 BC                              | 2012 AB                                                      | 2012 BC                                               |

### AB AND BC MULTIPLE-CHOICE BY TYPE – SECURE EXAMS

| Type                                                         | 2013 AB                                                      | 2013 BC                               | 2014 AB                                          | 2014BC                         | 2015 AB                                           | 2015 BC                               |
|--------------------------------------------------------------|--------------------------------------------------------------|---------------------------------------|--------------------------------------------------|--------------------------------|---------------------------------------------------|---------------------------------------|
| 1. Rate/Accumulation                                         | 81                                                           | 13, 27, 81                            | 12, 81, 85                                       | 81, 89                         | 78                                                | 78,                                   |
| 2. Linear motion                                             | 8, 10, 80, 85                                                | 91                                    | 14, 27, 76, 85, 90                               | 86, 88, 90,                    | 26, 83,                                           |                                       |
| 3. Graph analysis<br>(Graph stem or analytic stem)           | 5, 8, 11, 13, 19, 21, 24, 28, 76, 79, 80, 82, 84, 87, 88, 92 | 6, 13, 18, 20, 24, 76, 79, 84, 85, 91 | 5, 9, 11, 15, 19, 22, 24, 78, 82, 84, 86, 87, 88 | 5, 9, 19, 76, 80, 82, 88, 91   | 9, 14, 19, 20, 22, 23, 80, 82, 85, 86, 87, 88, 92 | 1, 14, 22, 26, 77, 80, 85, 87, 88, 92 |
| 4. Area /volume                                              | 89                                                           | 78, 89                                | 79, 89                                           | 16, 78, 79,                    | 21, 81                                            | 81, 84                                |
| 5. Table & Riemann Sum                                       | 15, 83, 86                                                   | 77, 83, 86                            | 12, 80, 91, 92                                   | 12, 21, 86. 92                 | 4, 27, 77, 79,                                    | 4, 86, 92                             |
| 6. Differential Equations<br>(includes slope field)          | 25, 81, 90                                                   | 7, 9, 21, 25, 81                      | 18, 28                                           | 23, 77, 83,                    | 8, 18, 24,                                        | 9, 13, 18, 24,                        |
| 7. Other: Implicit, RR, families, roc, avg, theorems, et al. | 22, 77, 92                                                   | 21, 22, 28, 80, 85                    | 21                                               | 13, 15, 84                     | 12, 16, 17, 28, <b>76</b> , 90, 92                | 2, 5, 21, 27, 76, 82, 90, 91          |
| 8. Parametric                                                |                                                              | 8, 28, 87                             |                                                  | 85                             |                                                   | 8, 17                                 |
| 9. Polar                                                     |                                                              | 88                                    |                                                  | 16, 25                         |                                                   | 15,                                   |
| 10. Sequences and Series                                     |                                                              | 3, 11, 15, 19, 23, 26, 82, 90         |                                                  | 6, 10, 14, 17, 22, 24, 27, 87, |                                                   | 10, 16, 19, 20, 28, 79, 83, 89,       |
| 11. Limits & Continuity                                      | 1, 9, 12, 17, 84                                             | 12, 14, 17, 77                        | 5, 7, 10, 16, 20                                 | 3, 5, 7, 11,                   | 5, 11, 15, 89                                     | 12, 25                                |
| 12. Compute Derivative<br>(Inverse)                          | 2, 4, 7, 14, 15, 16, 17, 18, 19, 20, <u>23</u>               | 1, 4, 5, 17, 18, 22, 28, 85           | 2, 3, 13, 17, 20, 23, 25, 26, <u>92</u>          | 2, 15, 20, 26, <u>28</u> , 80  | 2, 7, 10, 13, 25, 79,                             | 2, 7, 17, 23, 25, <u>27</u>           |
| 13. Compute Integral                                         | 3, 6, 13, 21, 23, 26, 27, 78, 91                             | 2, 6, 10, 13, 16, 27, 92              | 1, 4, 6, 8, 77, 83                               | 1, 4, 8, 18, 89, 92            | 1, 2, 6, 84, 91                                   | 3, 6, 11, 21, 86                      |
| Type                                                         | 2013 AB                                                      | 2013 BC                               | 2014 AB                                          | 2014BC                         | 2015 AB                                           | 2015 BC                               |

# AB AND BC MULTIPLE-CHOICE BY TYPE – SECURE EXAMS

| Type                                                         | 2016 AB*                                       | 2016 BC*                              | 2017 AB                                        | 2017 BC                    | 2018 AB                                            | 2018 BC                                      |
|--------------------------------------------------------------|------------------------------------------------|---------------------------------------|------------------------------------------------|----------------------------|----------------------------------------------------|----------------------------------------------|
| 1. Rate/Accumulation                                         | 6, 76, 80, 85                                  | 4, 82, 84                             | 12, 84,                                        |                            | 5, 77, 81, 89                                      | 5, 77,                                       |
| 2. Linear motion                                             | 5, 12, <b>79</b> , 86,                         | 12, 15, <b>79</b> ,                   | 4, 17, 82                                      |                            | 7, 13, 78, 83,                                     | 81,                                          |
| 3. Graph analysis<br>4. (Graph stem or analytic stem)        | 4, 14, 78, <b>79</b> , 81, 82, 88, 90          | 13, 15, 27, 78, <b>79</b> , 81, 89,   | 16, 20, 27, 29, 76, 80, 81, 83, 85, 86, 87, 88 | 9, 19, 78, 79, 81, 86, 88  | 8, 15, 16, 18, 26, 76, 80, 88,                     | 8, 9, 14, 15, 23, 26, 76, 80, 84, 89.        |
| 5. Area /volume                                              | 7, 23, 28,                                     |                                       | 23,                                            | 83, 85, 89                 | 29, 86,                                            | 86,                                          |
| 6. Table & Riemann Sum                                       | 6, 21, <b>30</b> , 89                          | 6, <b>29</b> , 77,                    | 4, 30, 87                                      | 21,                        | 5, 26, 85, 90                                      | 5, 26, 79,                                   |
| 7. Differential Equations (includes slope field)             | 16, 17, 22, 84                                 | 16, 28, 77,                           | 13, 22,                                        | 10, 13, 27                 | 7, 22, 25, 30,                                     | 13, 27, 29, 79,                              |
| 8. Other: Implicit, RR, families, roc, avg, theorems, et al. | 3, 8, 14, 19, 25, 27, <b>80</b> , 89,          | 5, 13, 25, <b>82</b> , 85, 89         | 6, 7, 8, 11, 18, 24, 28, 79, 85, 89, 90        | 11, 19, 21, 24, 26, 28, 84 | 4, 10, 12, 13, 18, 20, 21, 27, 77, 79, 82, 84, 87, | 7, 9, 12, 17, 18, 20, 28, 77, 78, 82, 84, 85 |
| 9. Parametric, Vector                                        |                                                | 3, 7, 88,                             |                                                | 4, 8, 20, 80,              |                                                    | 83, 88,                                      |
| 10. Polar                                                    |                                                | 18, 26, 80                            |                                                | 89                         |                                                    | 19, 25,                                      |
| 11. Sequences and Series                                     |                                                | 8, 10, 14, 20, <b>22</b> , 30, 90     |                                                | 5, 16, 23, 29, 90          |                                                    | 6, 10, 22, 24, 30, 87, 89, 90,               |
| 12. Limits & Continuity                                      | 15, 19, 24, 77, 83, 90                         | 24, 83, 86, 89                        | 15, 21, 26, 29, 30, 90                         | 6, 14, 15, 78              | 3, 9, 19, 24, 28, 79, 85,                          | 3, 767,                                      |
| 13. Compute Derivative<br>14. ( <u>Inverse</u> )             | 2, 13, 18, 19, 20, 21, <u>29</u> , <b>87</b> , | 1, 3, 5, 19, <b>87</b> ,              | 1, 3, 5, 8, 11, 12, 18, 21, 25,                | 1, 2, 4, 9, 11, 14         | 1, 6, 9, 10, 12, 14, 21, <u>90</u>                 | 1, 7, 12, 18, 84                             |
| 15. Compute Integral                                         | 1, 9, 10, 11, 26, <b>26</b> , 84,              | 2, 9, 11, 14, 17, 21, <b>23</b> , 76, | 2, 7, 10, 24, 77                               | 2, 7, 12, 17, 22, 77, 84   | 2, 4, 11, 15, <b>17</b> , 23,                      | 2, 4, 11, 15, 16, 21, 28, 85,                |
| Type                                                         | 2016 AB*                                       | 2016 BC*                              | 2017 AB                                        | 2017 BC                    | 2018 AB                                            | 2018 BC                                      |

\*For 2016: Bold numbers are new topics or new style questions based on the 2016-17 CED

## AB AND BC MULTIPLE-CHOICE BY TYPE – SECURE EXAMS

| Type                                                         | 2019 AB                                       | 2019 BC                               |
|--------------------------------------------------------------|-----------------------------------------------|---------------------------------------|
| 1. Rate/Accumulation                                         | 27, 79                                        | 77                                    |
| 2. Linear motion                                             | 14, 19, 77, 87                                | 85                                    |
| 3. Graph analysis.<br>(Graph stem or analytic stem)          | 5, 10, 17, 24, 26, 29, 76, 81, 83, 85, 86, 89 | 2, 9, 10, 24, 76, 78, 81, 83, 84, 86, |
| 4. Area /volume                                              | 9, 23                                         | 27,                                   |
| 5. Table & Riemann Sum                                       | 12, 30, 84, 90                                | 6, 12, 23, 29,                        |
| 6. Differential Equations<br>(includes slope field)          | 16, 22, 25, 80                                | 13, 16, 82, 89                        |
| 7. Other: Implicit, RR, families, roc, avg, theorems, et al. | 6, 15, 20, 28, 78, 80, 88                     | 14, 20, 25, 28, 79, 88, 90            |
| 8. Parametric                                                |                                               | 4, 87,                                |
| 9. Polar                                                     |                                               | 18, 22,                               |
| 10. Sequences and Series                                     |                                               | 5, 7, 17, 19, 21, 26, 30, 80,         |
| 11. Limits & Continuity                                      | 8, 13, 21                                     | 8,                                    |
| 12. Compute Derivative<br>13. <u>(Inverse)</u>               | 2, 3, 6, 7, 18                                | 3, 28,                                |
| 14. Compute Integral                                         | 1, 4, 11, 82,                                 | 1, 11, 15, 25,                        |
| Type                                                         | 2019 AB                                       | 2019 BC                               |