Group A:

1. Find P in terms of A and B, if ;
2. Find the domain of a function: ;
3. Find , if  and .
4. Find the slope of a line passing through the points (3, -1) and (5, 7);
5. Find increasing and decreasing intervals of a function ;
6. Evaluate the limit : ;

Group C:

1. Evaluate the limit: ;
2. Find Extrema of the function  on the segment [0;4];
3. Find the derivative of the function ;
4. Find vertical asymptotes of the function ;
5. Evaluate , if ;
6. Evaluate the integral .

Pretest results ATSU

|  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
|  | Group A | | | | | |  | Group C | | | | | |
| # | 1 | 2 | 3 | 4 | 5 | 6 |  | 7 | 8 | 9 | 10 | 11 | 12 |
| 1 | 1 | 1 | 0 | 1 | 0 | 0 |  | 0 | 0 | 0 | 0 | 0 | 0 |
| 2 | 1 | 1 | 0 | 0 | 0 | 0 |  | 0 | 0 | 0 | 0 | 0 | 0 |
| 3 | 1 | 1 | 1 | 1 | 1 | 0 |  | 0 | 0 | 0 | 0 | 0 | 0 |
| 4 | 1 | 1 | 0 | 0 | 0 | 0 |  | 0 | 0 | 0 | 0 | 0 | 0 |
| 5 | 1 | 1 | 1 | 0 | 1 | 0 |  | 0 | 0 | 0 | 0 | 0 | 0 |
| 6 | 1 | 1 | 0 | 0 | 0 | 0 |  | 0 | 0 | 0 | 0 | 0 | 0 |
| 7 | 1 | 1 | 0 | 0 | 0 | 0 |  | 0 | 0 | 0 | 0 | 0 | 0 |
| 8 | 1 | 1 | 0 | 1 | 1 | 0 |  | 0 | 0 | 0 | 0 | 0 | 0 |
| 9 | 1 | 1 | 0 | 0 | 0 | 0 |  | 0 | 0 | 0 | 0 | 0 | 0 |
| 10 | 1 | 1 | 0 | 0 | 0 | 0 |  | 0 | 0 | 0 | 0 | 0 | 0 |
| 11 | 1 | 0 | 0 | 0 | 0 | 0 |  | 0 | 0 | 0 | 0 | 0 | 0 |
| 12 | 1 | 1 | 0 | 0 | 0 | 0 |  | 0 | 0 | 0 | 0 | 0 | 0 |
| 13 | 1 | 0 | 0 | 0 | 0 | 0 |  | 0 | 0 | 0 | 0 | 0 | 0 |
| 14 | 1 | 1 | 0 | 0 | 0 | 0 |  | 0 | 0 | 0 | 0 | 0 | 0 |
| 15 | 1 | 1 | 1 | 1 | 1 | 0 |  | 0 | 0 | 0 | 0 | 0 | 0 |
| 16 | 1 | 1 | 1 | 0 | 1 | 0 |  | 0 | 0 | 0 | 0 | 0 | 0 |
| 17 | 1 | 0 | 0 | 0 | 0 | 0 |  | 0 | 0 | 0 | 0 | 0 | 0 |
| 18 | 1 | 1 | 0 | 0 | 0 | 0 |  | 0 | 0 | 0 | 0 | 0 | 0 |
| 19 | 1 | 1 | 0 | 0 | 0 | 0 |  | 0 | 0 | 0 | 0 | 0 | 0 |
| 20 | 1 | 1 | 0 | 0 | 0 | 0 |  | 0 | 0 | 0 | 0 | 0 | 0 |
| 21 | 1 | 1 | 1 | 0 | 1 | 0 |  | 0 | 0 | 0 | 0 | 0 | 0 |
| 22 | 1 | 1 | 0 | 0 | 0 | 0 |  | 0 | 0 | 0 | 0 | 0 | 0 |
| 23 | 1 | 0 | 0 | 0 | 0 | 0 |  | 0 | 0 | 0 | 0 | 0 | 0 |
| 24 | 1 | 1 | 0 | 1 | 1 | 0 |  | 0 | 0 | 0 | 0 | 0 | 0 |
| 25 | 1 | 1 | 0 | 0 | 0 | 0 |  | 0 | 0 | 0 | 0 | 0 | 0 |
| 26 | 1 | 1 | 0 | 1 | 0 | 0 |  | 0 | 0 | 0 | 0 | 0 | 0 |
| 27 | 1 | 1 | 1 | 1 | 1 | 0 |  | 0 | 0 | 0 | 0 | 0 | 0 |
| 28 | 1 | 1 | 0 | 0 | 0 | 0 |  | 0 | 0 | 0 | 0 | 0 | 0 |
| 29 | 1 | 1 | 0 | 0 | 0 | 0 |  | 0 | 0 | 0 | 0 | 0 | 0 |
| 30 | 1 | 1 | 0 | 0 | 0 | 0 |  | 0 | 0 | 0 | 0 | 0 | 0 |