**Intermediate Algebra**

**Make-up Online Lab 1**

|  |  |
| --- | --- |
| 1. | Find the indicated value for the given rational expression. Match your result to the correct answer below. |
|  | A) B) C) D) |

|  |  |
| --- | --- |
| 2. | Reduce the given expression to lowest terms. |
|  | A) B) C) D) |

|  |  |
| --- | --- |
| 3. | Reduce the given expression to lowest terms. |
|  | A) B) C) D) *y* + 1 |

|  |  |
| --- | --- |
| 4. | Reduce the given expression to lowest terms. |
|  | A) B) C) D) |

|  |  |
| --- | --- |
| 5. | Reduce the given expression to lowest terms and match your result to the correct answer below. |
|  | A) B) C) D) |

|  |  |
| --- | --- |
| 6. | Reduce the expression to lowest terms and match your result to the correct answer below. |
|  | A) B) C) D) |

|  |  |
| --- | --- |
| 7. | Build the rational expression into an equivalent rational expression with the indicated denominator. Match your result to the correct answer below. |
|  | A) B) C) D) |

|  |  |
| --- | --- |
| 8. | Perform the indicated operations and write your result in lowest terms. Match your result to the correct answer below. |
|  | A) B) C) D) |

|  |  |
| --- | --- |
| 9. | Perform the indicated operations and write your result in lowest terms. Match your result to the correct answer below. |
|  | A) B) C) D) 0 |

|  |  |
| --- | --- |
| 10. | Solve the equation and match your result to the correct answer below. Watch for extraneous solutions. |
|  | A) –2, 5 B) 4, –4 C) –4 D) No solution |

**Make-up Online Lab 2**

|  |  |
| --- | --- |
| 1. | Which of the following graphs correctly describes the system and its solution? |
| A) |  |
| B) |  |
| C) |  |
| D) | None of these. |

|  |  |
| --- | --- |
| 2. | Which of the following systems of equations corresponds to the graph? |
|  | A) B) C) D) |

|  |  |  |  |
| --- | --- | --- | --- |
| 3. | Solve the system of linear equations by the substitution method. Then, state whether the system is independent, dependent, or inconsistent. Match your result to the correct answer below. 4*x* + 10*y* = –28 6*x* + 7*y* = 6 | | |
|  | A){(–2,–2)}, independent | C) | {(8,–6)}, independent |
|  | B){(1,0)}, dependent | D) | , inconsistent |

|  |  |
| --- | --- |
| 4. | Solve the system of linear equations by the substitution method. Then, state whether the system is independent, dependent, or inconsistent. Match your result to the correct answer below. 4*x* –3*y* = 4 12*x* –9*y* = 12 |
|  | A) {(0, 0)}, independent B) {(4, 4)}, independent C) dependent D) , inconsistent |

|  |  |
| --- | --- |
| 5. | The length of a rectangular painting is 9 feet greater than the width. If the perimeter is 30 feet, then what are the length and the width? |
|  | A) Length 12 ft, width 3 ft B) Length 16 ft, width 7 ft  C) Length 10 ft, width 1 ft D) Length 20 ft, width 11 ft |

**Make-up Online Lab 3**

|  |  |
| --- | --- |
| 1. | Write as a single interval if possible: [–2, )(–,–7) |
|  | A) (–, ) B) [–2, ) C) (–7, –2) D)  |

|  |  |
| --- | --- |
| 2. | Graph the solution set of the compound inequality and match your result to the correct answer below. |
| A) |  |
| B) |  |
| C) |  |
| D) |  |

|  |  |
| --- | --- |
| 3. | Graph the solution to the compound inequality –4 < *x* – 2 < 1. |
| A) |  |
| B) |  |
| C) |  |
| D) |  |

|  |  |
| --- | --- |
| 4. | Solve: |3(*x* + 2) – 4| = 1 |
|  | A) B) C) D) |

|  |  |
| --- | --- |
| 5. | Solve the inequality and write the solution set in interval notation. Match your result to the correct answer below. 3 < |*x*| – 5 |
|  | A) (–8, 8) B) (–, –8)(8, ) C) (8, ) D) (–, –8)(8, ) |

|  |  |
| --- | --- |
| 6. | Graph the solution to the absolute value inequality and match your result with the correct answer below. |
| A) | |  |  |  |  |  |  |  |  |  | | --- | --- | --- | --- | --- | --- | --- | --- | --- | | **3** | **4** | **5** | **6** | **7** | **8** | **9** | **10** | **11** | |
| B) | |  |  |  |  |  |  |  |  |  | | --- | --- | --- | --- | --- | --- | --- | --- | --- | | **3** | **4** | **5** | **6** | **7** | **8** | **9** | **10** | **11** | |
| C) | |  |  |  |  |  |  |  |  |  | | --- | --- | --- | --- | --- | --- | --- | --- | --- | | **3** | **4** | **5** | **6** | **7** | **8** | **9** | **10** | **11** | |
| D) | |  |  |  |  |  |  |  |  |  | | --- | --- | --- | --- | --- | --- | --- | --- | --- | | **3** | **4** | **5** | **6** | **7** | **8** | **9** | **10** | **11** | |

|  |  |
| --- | --- |
| 7. | Which graph below correctly indicates the solution set of the linear inequality ? |
| A) |  |
| B) |  |
| C) |  |
| D) |  |

|  |  |
| --- | --- |
| 8. | Which graph below correctly indicates the solution set of the linear inequality ? |
| A) |  |
| B) |  |
| C) |  |
| D) |  |

|  |  |
| --- | --- |
| 9. | Which of the following graphs correctly represents the solution set of the compound inequality or ? |
| A) |  |
| B) |  |
| C) |  |
| D) |  |

|  |  |
| --- | --- |
| 10. | Which of the following graphs correctly represents the solution set of the inequality ? |
| A) |  |
| B) |  |
| C) |  |
| D) |  |

**Make-up Online Lab 4**

|  |  |
| --- | --- |
| 1. | Find the root: |
|  | A) 4 B) –16 C) 16 D) –4 |

|  |  |
| --- | --- |
| 2. | Find the root: |
|  | A) B) C) D) |

|  |  |
| --- | --- |
| 3. | Simplify: |
|  | A) 4 B) C) 9 D) –4 |

|  |  |
| --- | --- |
| 4. | Find the domain of the radical function. |
|  | A) [–4, 4] B) [–4, ∞) C) (–∞, 4] D) (–∞, ∞) |

|  |  |
| --- | --- |
| 5. | Evaluate: (125)–4/3 |
|  | A) B) C) D) 5 |

|  |  |
| --- | --- |
| 6. | Simplify. |
|  | A) B) C) D) |

|  |  |
| --- | --- |
| 7. | Simplify: |
|  | A) B) C) D) |

|  |  |
| --- | --- |
| 8. | Simplify: |
|  | A) B) C) D) |

|  |  |
| --- | --- |
| 9. | Find all real solutions: *x*2 = 81 |
|  | A) {9} B) {–9} C) {–9, 9} D) |

|  |  |
| --- | --- |
| 10. | Find all real solutions: *z*2– 20 = 0 |
|  | A) B) C) D) |

|  |  |
| --- | --- |
| 11. | Find the sum: |
|  | A) B) 3 C) D) |

|  |  |
| --- | --- |
| 12. | Find the product: (–6 + 4*i*)(–6 + 4*i*) |
|  | A) 20 B) – 48*i* C) –10 – 48*i* D) 20 – 48*i* |

|  |  |
| --- | --- |
| 13. | Find the quotient: |
|  | A) B) C) D) |

|  |  |  |  |
| --- | --- | --- | --- |
| 14. | Find the complex solutions: | | |
| A) |  | C) |  |
| B) |  | D) |  |

|  |  |
| --- | --- |
| 15. | Solve: |
|  | A) B) C) D) |

**Make-up Online Lab 5**

|  |  |
| --- | --- |
| 1. | Solve by factoring: *x*2 + *x* – 72 = 0 |
|  | A) {–9, –8} B) {8, 9} C) {–8, 9} D) {–9, 8} |

|  |  |
| --- | --- |
| 2. | Solve: (*x* – 3)2 = 36 |
|  | A) {–3, 3} B) {–3, 9} C) {9, 9} D) {3, 9} |

|  |  |  |  |
| --- | --- | --- | --- |
| 3. | Solve by completing the square and match your result to the correct answer below. 3*x*2 + 5*x* – 1 = 0 | | |
| A) |  | C) |  |
| B) |  | D) |  |

|  |  |
| --- | --- |
| 4. | Solve: |
|  | A) {1, 4} B) {–1, –4} C) {4} D) |

|  |  |
| --- | --- |
| 5. | Find the imaginary solutions: *x*2 – 18*x* + 130 = 0 |
|  | A) {–9 + 7*i*, 9 – 7*i*} B) {9 – 7*i*, –9 – 7*i*} C) {9 – 7*i*} D) {9 – 7*i*, 9 + 7*i*} |

|  |  |
| --- | --- |
| 6. | Solve the given equation using the quadratic formula. Show your work. *y*2 + 15*y* = –54 |
|  | A){–9, –6} B) {9, 6} C) {9} D) |

|  |  |
| --- | --- |
| 7. | Find *b*2 – 4*ac* and the number of real solutions for the given equation. |
|  | A) 0, 1 B) 0, 2 C) 1152, 2 D) 0, 0 |

|  |  |
| --- | --- |
| 8. | Determine whether the graph of the quadratic function opens upward or downward. *f*(*x*) = *x*2 + *x* – 9 |
|  | A) Upward B) Downward |

|  |  |  |  |
| --- | --- | --- | --- |
| 9. | Which of the following is the correct graph of the function *f*(*x*) = *x*2 - 1? | | |
| A) |  | C) |  |
| B) |  | D) |  |

|  |  |
| --- | --- |
| 10. | Find the vertex and intercepts of the function . Match your result to the correct answer below. |
| A) | Vertex: ; Intercepts: |
| B) | Vertex: ; Intercepts: |
| C) | Vertex: ; Intercepts: |
| D) | Vertex: ; Intercepts: |