Exam 4

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| --- | --- | --- | --- |
| Identify the maximum or minimum value and the domain and range of the graph of the function  *y* = 2(*x* + 2)2 - 3   |  | | --- | |  |   A.  minimum value: 3 domain: all real numbers 3 range: all real numbers      B.  maximum value: -3 domain: all real numbers ≤ 3 range: all real numbers      C.  maximum value: 3 domain: all real numbers range: all real numbers ≤ 3      D.  minimum value: -3 domain: all real numbers range: all real numbers ≥ -3     |  | | --- | | Feedback:Please refer to: Lesson 4-1, p. 196, Example Problem 3, Problems 23-28 | |  | |
| Question 2 of 20  0.0/ 5.0 Points  Graph each function. How is each graph a translation of *f*(*x*) = *x* 2?  *y* = (*x* + 3)2 + 4   |  | | --- | |  |   A.  https://study.ashworthcollege.edu/access/content/group/59841a3a-ae83-40e0-9ad2-cdbb53b336a0/Algebra%20II%20Part%201/Additional%20Exam%20Question%20Images/Exam%203.1%20image%205%20(A).JPG  *f*(*x*) translated down 4 unit(s) and translated to the left 3 unit(s)      B.  https://study.ashworthcollege.edu/access/content/group/59841a3a-ae83-40e0-9ad2-cdbb53b336a0/Algebra%20II%20Part%201/Additional%20Exam%20Question%20Images/Exam%203.1%20image%205%20(B).JPG    *f*(*x*) translated up 4 unit(s) and translated to the left 3 unit(s)        C.  https://study.ashworthcollege.edu/access/content/group/59841a3a-ae83-40e0-9ad2-cdbb53b336a0/Algebra%20II%20Part%201/Additional%20Exam%20Question%20Images/Exam%203.1%20image%205%20(C).JPG  *f*(*x*) translated down 4 unit(s) and translated to the right 3 unit(s)        D.  https://study.ashworthcollege.edu/access/content/group/59841a3a-ae83-40e0-9ad2-cdbb53b336a0/Algebra%20II%20Part%201/Additional%20Exam%20Question%20Images/Exam%203.1%20image%205%20(D).JPG    *f*(*x*) translated down 4 unit(s) and translated to the right 3 unit(s)     |  | | --- | | Feedback:Please refer to: Lesson 4-1, p. 196, Example Problem 2, Problems 15-22 | |  | |
| Question 3 of 20  5.0/ 5.0 Points  Use the Quadratic Formula to solve the equation.  -2x2 - 5x + 5 = 0   |  | | --- | |  |   A.  https://study.ashworthcollege.edu/access/content/group/59841a3a-ae83-40e0-9ad2-cdbb53b336a0/Algebra%20II%20Part%201/Algebra2_Exam_4_files/image055.jpg https://study.ashworthcollege.edu/access/content/group/59841a3a-ae83-40e0-9ad2-cdbb53b336a0/Algebra%20II%20Part%201/Algebra2_Exam_4_files/image056.jpg      B.  https://study.ashworthcollege.edu/access/content/group/59841a3a-ae83-40e0-9ad2-cdbb53b336a0/Algebra%20II%20Part%201/Algebra2_Exam_4_files/image057.jpg https://study.ashworthcollege.edu/access/content/group/59841a3a-ae83-40e0-9ad2-cdbb53b336a0/Algebra%20II%20Part%201/Algebra2_Exam_4_files/image058.jpg      C.  https://study.ashworthcollege.edu/access/content/group/59841a3a-ae83-40e0-9ad2-cdbb53b336a0/Algebra%20II%20Part%201/Algebra2_Exam_4_files/image059.jpg https://study.ashworthcollege.edu/access/content/group/59841a3a-ae83-40e0-9ad2-cdbb53b336a0/Algebra%20II%20Part%201/Algebra2_Exam_4_files/image060.jpg      D.  https://study.ashworthcollege.edu/access/content/group/59841a3a-ae83-40e0-9ad2-cdbb53b336a0/Algebra%20II%20Part%201/Algebra2_Exam_4_files/image059.jpg https://study.ashworthcollege.edu/access/content/group/59841a3a-ae83-40e0-9ad2-cdbb53b336a0/Algebra%20II%20Part%201/Algebra2_Exam_4_files/image061.jpg     |  | | --- | | Feedback:Great job! | |  | |
| Question 4 of 20  0.0/ 5.0 Points  Use the vertex form to write the equation of the parabola.  https://study.ashworthcollege.edu/access/content/group/59841a3a-ae83-40e0-9ad2-cdbb53b336a0/Algebra%20II%20Part%201/Algebra2_Exam_4_files/Problem%2020.png         |  | | --- | |  |   A.  y = 3(x-2)2+ 2      B.  y = 3(x-2)2 -2      C.  y = 3(x+2)2+ 2      D.  y = 3(x+2)2 -2     |  | | --- | | Feedback:Please refer to: Lesson 4-2, p. 202, Example Problem 2, Problems 17-25 | |  | |
| Question 5 of 20  0.0/ 5.0 Points  What is the expression in factored form?  9x2 - 12x + 4   |  | | --- | |  |   A.  (3x + 2)2      B.  (-3x - 2)2      C.  (3x - 2)2      D. (-3x + 2)(3x - 2)     |  | | --- | | Feedback:Please refer to: Lesson 4-4, p. 218, 220, Example Problems 3 and 4, Problems 32-46 | |  | |
| Question 6 of 20  0.0/ 5.0 Points  Which of the equations is graphed below?  https://study.ashworthcollege.edu/access/content/group/59841a3a-ae83-40e0-9ad2-cdbb53b336a0/Algebra%20II%20Part%201/Algebra2_Exam_3_files/image%201.png   |  | | --- | |  |   A.  y = x2+ 3x + 2      B.  y = x2+ 6x + 10      C.  https://study.ashworthcollege.edu/access/content/group/4b2b4982-201b-40ee-bca4-c68acf295e8d/Algebra2_Exam_4_files/image040.jpgy = x2- 6x + 10      D.  y = -x2+ 6x - 10     |  | | --- | | Feedback:Please refer to: Lesson 4-2, P. 204, Example Problem 2, Problems 17-25 | |  | |
| Question 7 of 20  0.0/ 5.0 Points  Which of the following shows the equation y = x2 + 8x + 14 in vertex form?   |  | | --- | |  |   A.  y = (x+8)2+ 14      B.  y = (x+4)2 -2      C.  y = (x+4)2 -28      D.  y = (x-8)2+ 14     |  | | --- | | Feedback:Please refer to: Feedback: Lesson 4-2 p. 204, Example Problem 3, Problems 26-31 | |  | |
| Question 8 of 20  0.0/ 5.0 Points  Identify the vertex and the axis of symmetry of the graph of the function y = 2(x+2)2 - 4   |  | | --- | |  |   A.  vertex: (-2, -4);  axis of symmetry: x = -2      B.  vertex: (2, 4);  axis of symmetry: x = 2      C.  vertex: (-2, 4);  axis of symmetry: x = -2      D.  vertex: (2, -4);  axis of symmetry: x = 2     |  | | --- | | Feedback:Please refer to: Lesson 4-2, p. 202, Example Problem 1, Problems #8-16 | |  | |
| Question 9 of 20  0.0/ 5.0 Points  Graph each function. How is each graph a translation of *f(x*) = *x* 2?  *y* = (*x* - 2)2   |  | | --- | |  |   A.  https://study.ashworthcollege.edu/access/content/group/59841a3a-ae83-40e0-9ad2-cdbb53b336a0/Algebra%20II%20Part%201/Additional%20Exam%20Question%20Images/Exam%203.1%20image%204%20(A).JPG  *f*(*x*) translated down 2 unit(s)      B.  https://study.ashworthcollege.edu/access/content/group/59841a3a-ae83-40e0-9ad2-cdbb53b336a0/Algebra%20II%20Part%201/Additional%20Exam%20Question%20Images/Exam%203.1%20image%204%20(B).JPG  *f*(*x*) translated to the left 2 unit(s)        C.  https://study.ashworthcollege.edu/access/content/group/59841a3a-ae83-40e0-9ad2-cdbb53b336a0/Algebra%20II%20Part%201/Additional%20Exam%20Question%20Images/Exam%203.1%20image%204%20(C).JPG    *f*(*x*) translated to the right 2 unit(s)      D.  https://study.ashworthcollege.edu/access/content/group/59841a3a-ae83-40e0-9ad2-cdbb53b336a0/Algebra%20II%20Part%201/Additional%20Exam%20Question%20Images/Exam%203.1%20image%204%20(D).JPG     |  | | --- | | Feedback:Please refer to: Lesson 4-1, p. 196, Example Problem 2, Problems 15-22 | |  | |
| Question 10 of 20  0.0/ 5.0 Points  Solve the equation.  x2 + 18x + 81 = 25   |  | | --- | |  |   A. 14, 4      B. –4, –14      C. 14, –14      D. –4, 4     |  | | --- | | Feedback:Please refer to: Lesson 4-5, p. 226, Example Problem 1, Problems 9-17 | |  | |
| Question 11 of 20  0.0/ 5.0 Points  The function *y* = -16*t* 2 + 486  models the height y in feet of a stone ***t*** seconds after it is dropped from the edge of a vertical cliff. How long will it take the stone to hit the ground? Round to the nearest hundredth of a second.   |  | | --- | |  |   A. 11.02 seconds      B. 0.25 seconds      C. 7.79 seconds      D. 5.51 seconds     |  | | --- | | Feedback:Please refer to: Lesson 4-5, p. 228, Example Problem 4, Problems 36 | |  | |
| Question 12 of 20  5.0/ 5.0 Points  The axis of symmetry of the graph of y = -(x+4)2 -6 is   |  | | --- | |  |   A. x = 6      B.  x = -4      C. x = -6      D. x = 4     |  | | --- | | Feedback:Great job! | |  | |
| Question 13 of 20  0.0/ 5.0 Points  Simplify the number using the imaginary unit i.  https://study.ashworthcollege.edu/access/content/group/59841a3a-ae83-40e0-9ad2-cdbb53b336a0/Algebra%20II%20Part%201/Algebra2_Exam_4_files/image062.jpg   |  | | --- | |  |   A. 12      B. -12      C. 12i      D. 144i     |  | | --- | | Feedback:Please refer to: Lesson 4-8, p. 249, Example Problem 1, Problems #8-12 | |  | |
| Question 14 of 20  5.0/ 5.0 Points  What is the graph of the function?  *f*(*x*) = 2*x* 2   |  | | --- | |  |   A.  https://study.ashworthcollege.edu/access/content/group/59841a3a-ae83-40e0-9ad2-cdbb53b336a0/Algebra%20II%20Part%201/Additional%20Exam%20Question%20Images/Exam%203.1%20image%201%20(A).JPG      B.  https://study.ashworthcollege.edu/access/content/group/59841a3a-ae83-40e0-9ad2-cdbb53b336a0/Algebra%20II%20Part%201/Additional%20Exam%20Question%20Images/Exam%203.1%20image%201%20(B).JPG      C.  https://study.ashworthcollege.edu/access/content/group/59841a3a-ae83-40e0-9ad2-cdbb53b336a0/Algebra%20II%20Part%201/Additional%20Exam%20Question%20Images/Exam%203.1%20image%201%20(C).JPG      D.  https://study.ashworthcollege.edu/access/content/group/59841a3a-ae83-40e0-9ad2-cdbb53b336a0/Algebra%20II%20Part%201/Additional%20Exam%20Question%20Images/Exam%203.1%20image%201%20(D).JPG     |  | | --- | | Feedback:Great job! | |  | |
| Question 15 of 20  0.0/ 5.0 Points  Solve by graphing.  x2 +2x - 8 = 0   |  | | --- | |  |   A.  https://study.ashworthcollege.edu/access/content/group/59841a3a-ae83-40e0-9ad2-cdbb53b336a0/Algebra%20II%20Part%201/Algebra2_Exam_4_files/image044.jpg  –2, 4      B.  https://study.ashworthcollege.edu/access/content/group/59841a3a-ae83-40e0-9ad2-cdbb53b336a0/Algebra%20II%20Part%201/Algebra2_Exam_4_files/image045.jpg  2, –4      C.  https://study.ashworthcollege.edu/access/content/group/59841a3a-ae83-40e0-9ad2-cdbb53b336a0/Algebra%20II%20Part%201/Algebra2_Exam_4_files/image046.jpg  2, –4      D.  https://study.ashworthcollege.edu/access/content/group/59841a3a-ae83-40e0-9ad2-cdbb53b336a0/Algebra%20II%20Part%201/Algebra2_Exam_4_files/image047.jpg  –2, 4     |  | | --- | | Feedback:Please refer to: Lesson 4-5, p. 227, Example Problem 3, Problems 27-35 | |  | |
| Question 16 of 20  0.0/ 5.0 Points  What is the vertex of the graph of  y = 1/3 (x-9)2 + 5   |  | | --- | |  |   A.  (3,5)      B.  (9,5)      C. 3, equal to      D. (-9,5)     |  | | --- | | Feedback:Please refer to: Lesson 4-1, p. 204, Example Problem 3, Problems 23-28 | |  | |
| Question 17 of 20  0.0/ 5.0 Points  Simplify the expression.  (3 + *i*) - (2 - 2*i*)   |  | | --- | |  |   A. 1 + 3i      B. 5 - i      C. 4i      D. -1 - 3i     |  | | --- | | Feedback:Please refer to: Lesson 4-8, p. 250, Example Problem 3b, Problems #18-26 | |  | |
| Question 18 of 20  5.0/ 5.0 Points  What is the graph of the function?  https://study.ashworthcollege.edu/access/content/group/59841a3a-ae83-40e0-9ad2-cdbb53b336a0/Algebra%20II%20Part%201/Algebra2_Exam_4_files/image002.jpg   |  | | --- | |  |   A.  https://study.ashworthcollege.edu/access/content/group/59841a3a-ae83-40e0-9ad2-cdbb53b336a0/Algebra%20II%20Part%201/Algebra2_Exam_4_files/image004.jpg      B.  https://study.ashworthcollege.edu/access/content/group/59841a3a-ae83-40e0-9ad2-cdbb53b336a0/Algebra%20II%20Part%201/Algebra2_Exam_4_files/image005.jpg      C.  https://study.ashworthcollege.edu/access/content/group/59841a3a-ae83-40e0-9ad2-cdbb53b336a0/Algebra%20II%20Part%201/Algebra2_Exam_4_files/image003.jpg      D.  https://study.ashworthcollege.edu/access/content/group/59841a3a-ae83-40e0-9ad2-cdbb53b336a0/Algebra%20II%20Part%201/Algebra2_Exam_4_files/image006.jpg     |  | | --- | | Feedback:Great job! | |  | |
| Question 19 of 20  0.0/ 5.0 Points  What is the expression in factored form?  x2 + 14x + 48   |  | | --- | |  |   A. (x + 6)(x + 8)      B. (x + 8)(x - 6)      C. (x + 6)(x - 8)      D. (x - 8)(x - 6)     |  | | --- | | Feedback:Please refer to: Lesson 4-4, p. 217, Example Problem 1, Problems #14-31 | |  | |
| Question 20 of 20  0.0/ 5.0 Points  What value completes the square for the expression?  x2 - 18x   |  | | --- | |  |   A. 9      B. -9      C. 81      D. -81 |