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

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A. minimum value: 3domain: all real numbers 3range: all real numbers *

B. maximum value: -3domain: all real numbers ≤ 3range: all real numbers *

C. maximum value: 3domain: all real numbersrange: all real numbers ≤ 3 *

D. minimum value: -3domain: all real numbersrange: all real numbers ≥ -3

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| Feedback:Please refer to: Lesson 4-1, p. 196, Example Problem 3, Problems 23-28 |
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| Question 2 of 200.0/ 5.0 PointsGraph each function. How is each graph a translation of *f*(*x*) = *x* 2?*y* = (*x* + 3)2 + 4

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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)

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| Feedback:Please refer to: Lesson 4-1, p. 196, Example Problem 2, Problems 15-22 |
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| Question 3 of 205.0/ 5.0 PointsUse the Quadratic Formula to solve the equation.-2x2 - 5x + 5 = 0

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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

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| Feedback:Great job! |
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| Question 4 of 200.0/ 5.0 PointsUse 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

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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

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| Feedback:Please refer to: Lesson 4-2, p. 202, Example Problem 2, Problems 17-25 |
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| Question 5 of 200.0/ 5.0 PointsWhat is the expression in factored form?9x2 - 12x + 4

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A. (3x + 2)2*

B. (-3x - 2)2*

C. (3x - 2)2*

D. (-3x + 2)(3x - 2)

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| Feedback:Please refer to: Lesson 4-4, p. 218, 220, Example Problems 3 and 4, Problems 32-46 |
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| Question 6 of 200.0/ 5.0 PointsWhich 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

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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

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| Feedback:Please refer to: Lesson 4-2, P. 204, Example Problem 2, Problems 17-25 |
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| Question 7 of 200.0/ 5.0 PointsWhich of the following shows the equation y = x2 + 8x + 14 in vertex form?

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A. y = (x+8)2+ 14*

B. y = (x+4)2 -2*

C. y = (x+4)2 -28*

D. y = (x-8)2+ 14

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| Feedback:Please refer to: Feedback: Lesson 4-2 p. 204, Example Problem 3, Problems 26-31 |
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| Question 8 of 200.0/ 5.0 PointsIdentify the vertex and the axis of symmetry of the graph of the function y = 2(x+2)2 - 4

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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

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| Feedback:Please refer to: Lesson 4-2, p. 202, Example Problem 1, Problems #8-16 |
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| Question 9 of 200.0/ 5.0 PointsGraph each function. How is each graph a translation of *f(x*) = *x* 2?*y* = (*x* - 2)2

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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

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| Feedback:Please refer to: Lesson 4-1, p. 196, Example Problem 2, Problems 15-22 |
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| Question 10 of 200.0/ 5.0 PointsSolve the equation.x2 + 18x + 81 = 25

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A. 14, 4*

B. –4, –14*

C. 14, –14*

D. –4, 4

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| Feedback:Please refer to: Lesson 4-5, p. 226, Example Problem 1, Problems 9-17 |
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| Question 11 of 200.0/ 5.0 PointsThe 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.

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A. 11.02 seconds*

B. 0.25 seconds*

C. 7.79 seconds*

D. 5.51 seconds

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| Feedback:Please refer to: Lesson 4-5, p. 228, Example Problem 4, Problems 36 |
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| Question 12 of 205.0/ 5.0 PointsThe axis of symmetry of the graph of y = -(x+4)2 -6 is

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A. x = 6*

B. x = -4*

C. x = -6*

D. x = 4

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| Feedback:Great job! |
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| Question 13 of 200.0/ 5.0 PointsSimplify 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

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A. 12*

B. -12*

C. 12i*

D. 144i

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| Feedback:Please refer to: Lesson 4-8, p. 249, Example Problem 1, Problems #8-12 |
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| Question 14 of 205.0/ 5.0 PointsWhat is the graph of the function?*f*(*x*) = 2*x* 2

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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

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| Feedback:Great job! |
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| Question 15 of 200.0/ 5.0 PointsSolve by graphing.x2 +2x - 8 = 0

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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

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| Feedback:Please refer to: Lesson 4-5, p. 227, Example Problem 3, Problems 27-35 |
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| Question 16 of 200.0/ 5.0 PointsWhat is the vertex of the graph ofy = 1/3 (x-9)2 + 5

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A. (3,5)*

B. (9,5)*

C. 3, equal to*

D. (-9,5)

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| Feedback:Please refer to: Lesson 4-1, p. 204, Example Problem 3, Problems 23-28 |
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| Question 17 of 200.0/ 5.0 PointsSimplify the expression.(3 + *i*) - (2 - 2*i*)

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A. 1 + 3i*

B. 5 - i*

C. 4i*

D. -1 - 3i

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| Feedback:Please refer to: Lesson 4-8, p. 250, Example Problem 3b, Problems #18-26 |
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| Question 18 of 205.0/ 5.0 PointsWhat 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

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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

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| Feedback:Great job! |
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| Question 19 of 200.0/ 5.0 PointsWhat is the expression in factored form?x2 + 14x + 48

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A. (x + 6)(x + 8)*

B. (x + 8)(x - 6)*

C. (x + 6)(x - 8)*

D. (x - 8)(x - 6)

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| Feedback:Please refer to: Lesson 4-4, p. 217, Example Problem 1, Problems #14-31 |
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| Question 20 of 200.0/ 5.0 PointsWhat value completes the square for the expression?x2 - 18x

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A. 9*

B. -9*

C. 81*

D. -81 |