Name:

Date:

School:

Facilitator:

5.07 Inverse Functions (45 Points)

**Complete the charts.**

1. Find the inverse of *f* (*x*) = 4*x* + 1, showing every step. Then verify that it is an inverse.

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| Inverse of *f*(*x*) - Step |
| *f*(*x*) = 4*x* + 1 |
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Verify that it is an inverse.

| Find *f*(*f*-1(*x*)). Show your work step by step. | **Find *f*-1(*f*(*x*)) . Show your work step by step.** |
| --- | --- |
| *f*(*f* -1 (*x*)) = | *f*-1(*f*(*x*)) = |
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1. Find the inverse of *f* (*x*) = 2*x*² − 3, showing every step. Then verify that it is an inverse.

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| Inverse of *f*(*x*) - Step |
| *f*(*x*) = 2*x*2 – 3 |
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Verify that it is an inverse.

| Find *f*(*f*-1(*x*)). Show your work step by step. | **Find *f*-1(*f*(*x*)) . Show your work step by step.** |
| --- | --- |
| *f*(*f* -1 (*x*)) = | *f*-1(*f*(*x*)) = |
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1. Find the inverse of *f* (*x*) = (*x* + 1)2 + 6, showing every step. Then verify that it is an inverse.

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| --- |
| Inverse of *f*(*x*) - Step |
| *f*(*x*) = (*x* + 1)2 + 6 |
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Verify that it is an inverse.

| Find *f*(*f*-1(*x*)). Show your work step by step. | **Find *f*-1(*f*(*x*)) . Show your work step by step.** |
| --- | --- |
| *f*(*f* -1 (*x*)) = | *f*-1(*f*(*x*)) = |
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