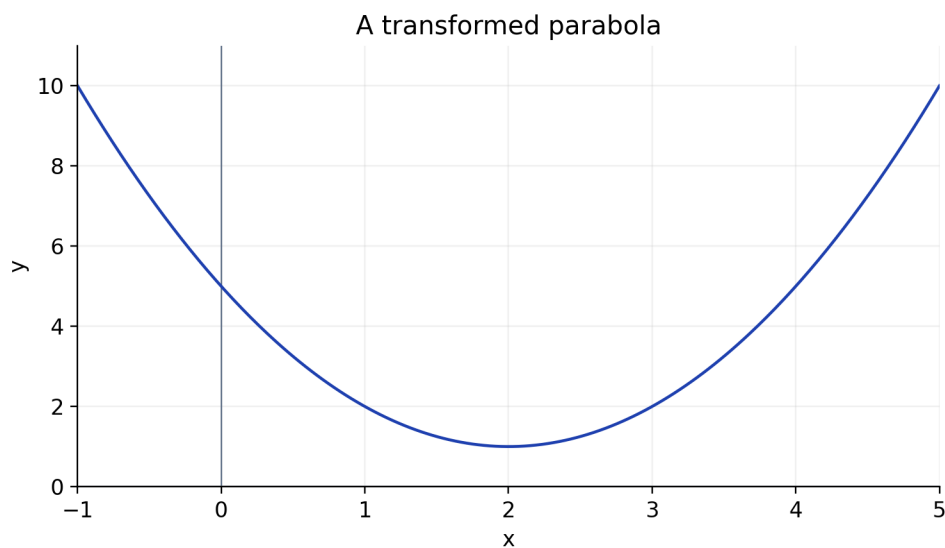


Lesson 1.1 · Practice

No calculator required | Name: _____

1. For $g(x) = (x - 2)^2 + 1$, identify the vertex, axis, domain, and range.



Read the shifted vertex and lowest output.

2. Find the domain of $\frac{\sqrt{x-1}}{x-3}$.

Lesson 1.1 · Practice

No calculator required | Name: _____

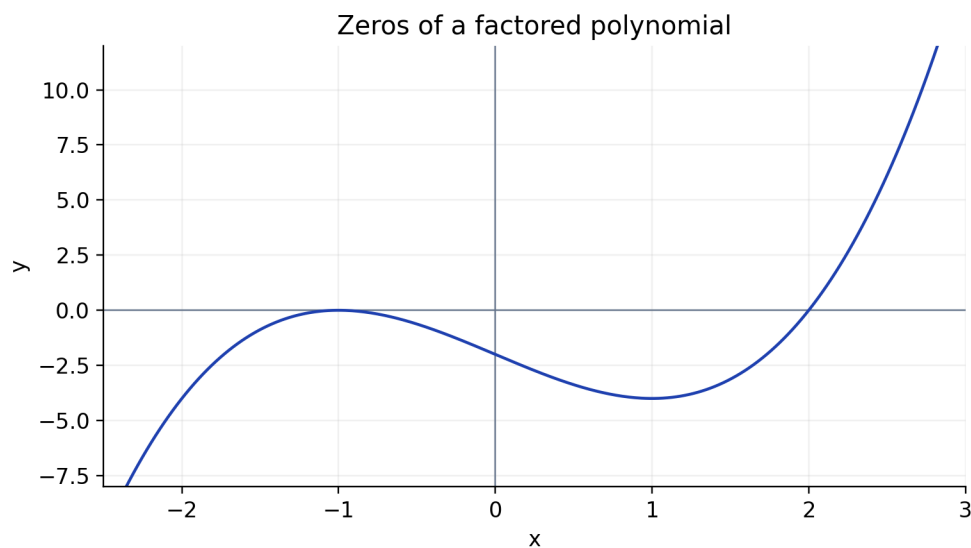
3. If $f(x) = \sqrt{x}$ and $g(x) = x - 2$, find $(f \circ g)(x)$ and its domain.

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Lesson 1.2 · Practice

No calculator required | Name: _____

4. For $p(x) = (x + 1)^2(x - 2)$, identify zeros, multiplicities, end behavior, and the y-intercept.



Compare the behavior at the two zeros.

5. Find the remainder when $p(x) = 2x^3 - x + 5$ is divided by $x - 2$.

Lesson 1.2 · Practice

No calculator required | Name: _____

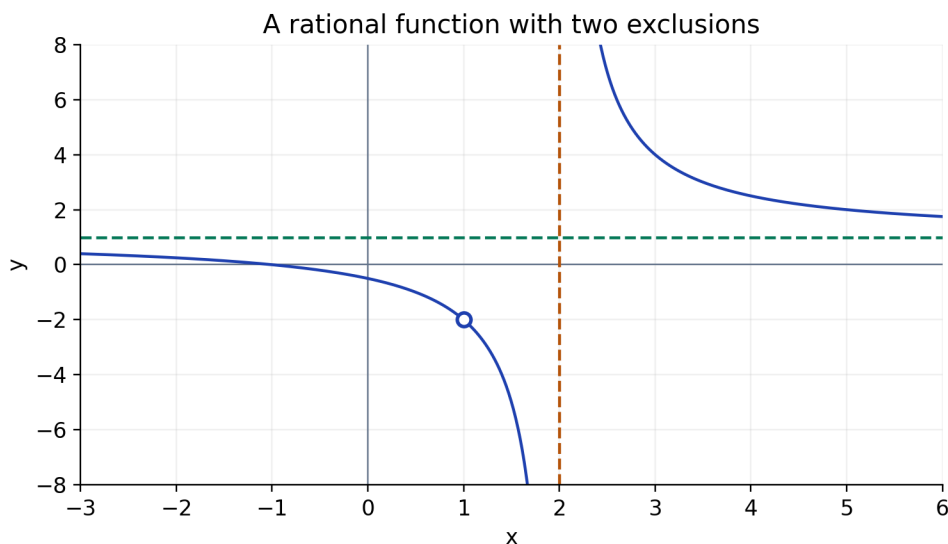
6. A real-coefficient polynomial has zero $2 + 3i$. What other zero must it have?

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Lesson 1.3 · Practice

No calculator required | Name: _____

7. Classify the excluded inputs and asymptotes of $f(x) = \frac{x^2 - 1}{(x - 1)(x - 2)}$.



Preserve both exclusions when canceling the common factor.

8. Solve $\sqrt{x + 2} = x$ and check every candidate.

Lesson 1.3 · Practice

No calculator required | Name: _____

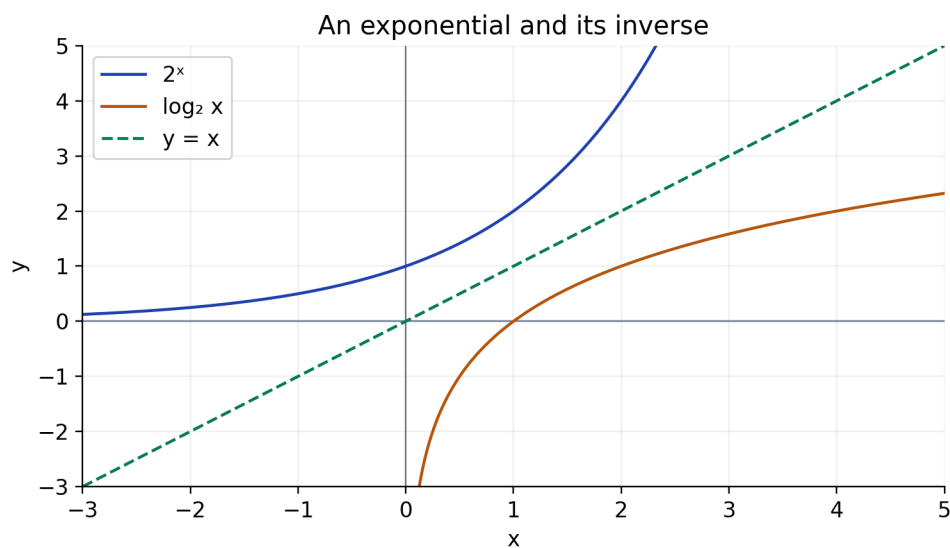
9. Solve $\frac{x-1}{x+2} > 0$.

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Lesson 1.4 · Practice

No calculator required | Name: _____

10. Compare $f(x) = 2^x$ and $g(x) = \log_2 x$. State domains and their relationship.



Compare the input and output roles on the two curves.

11. Solve $\log_2 x + \log_2 (x - 2) = 3$.

Lesson 1.4 · Practice

No calculator required | Name: _____

12. An amount starts at 80 and halves every 4 years. Write its model and evaluate it at 12 years.

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