

1 Domain

1.1 Example

1. Find the domain of $\frac{x^2+1}{x-5}$.
2. Find the domain of $\sqrt{4 - (1 - 2x)^2}$.
3. Find the range of $-4\sqrt{x} + 2$.

1.2 Problems

4. Find the domain of $\ln(x - 3)$.
5. Find the domain of $\sqrt{3x - 3}$.
6. Find the domain of $\sqrt{9 - (2x + 3)^2}$.
7. Find the range of $2e^x + 1$.
8. Find the range of $6 \sin x + 3$.
9. Find the range of $-2 \cos x + 1$.

1.3 Extra Problems

10. Find the domain of $\frac{1}{2x+1}$.
11. Find the domain of $\sqrt{3 - x}$.
12. Find the domain of e^{2x+1} .
13. Find the range of $5 \arctan(x) - \pi$.
14. Find the range of $\frac{3}{x+2} - 1$.

2 Inverses

2.1 Example

15. Find the inverse and the domain and range of e^{x^2} on $(-\infty, 0]$.

2.2 Problems

16. Find the inverse and the domain and range of $y = (x + 1)^3 - 2$.
17. Find the inverse and the domain and range of $y = \frac{x}{1-x}$.