

WORKSHEET

Domain and Range

Unsolved with Answer key



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Simplifying Fractions

Problem: Simplify the following fractions. Write your answers in the simplest form.

Q 1: Determine the domain and range of $f(x) = \frac{3x+2}{x-5}$.

Q 2: Find the domain and range of $f(x) = \sqrt{2x + 7}$.

Q 3: Identify the domain and range of $f(x) = \frac{1}{x^2-4}$.

Q 4: Determine the domain and range of $f(x) = x^2 - 4x + 7$.

Q 5: Find the domain and range of $f(x) = \sqrt{9 - x^2}$.

Q 6: Identify the domain and range of $f(x) = \ln(3x - 1)$.

Q 7: Determine the domain and range of $f(x) = e^x$.

Q 8: Find the domain and range of $f(x) = \frac{2}{x^2+4}$.

Q 9: Identify the domain and range of $f(x) = |x - 3|$.

Q 10: Determine the domain and range of $f(x) = \frac{1}{\sqrt{x+4}}$.

Answer Key

Domain and Range

1: $x = 5, y = 3$

2: $x \geq -7/2, y \geq 0$

3: $x = 2 \text{ and } -2, y \neq 0$

4: $x = \text{All Real numbers}, y \geq 3$

5: $-3 \leq x \leq 3, 0 \leq y \leq 3$

6: $x > 1/3, y = \text{All Real numbers}$

7: $x = \text{All Real numbers}, y > 0$

8: $x = \text{All Real numbers}, 0 < y \leq 21$

9: $x = \text{All real numbers}, y \geq 0$

10: $x > -4, y > 0$