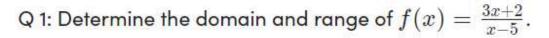# GeeksforGeeks

WORKSHEET

Domain and Range

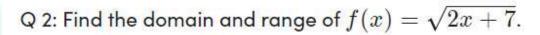*Unsolved with Answer key*

WORKSHEET

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 $f(x) = \frac{1}{\sqrt{x+4}}$.

<u>Answer Key</u>

Domain and Range

1: x = 5 , y = 3

2: x greater than = to -7/2 , y = greater than = to 0

3: x = 2 and -2 , y is not = to 0

4: x = All Real numbers , y greater than = to 3

5: x = − 3 ≤ x ≤ 3 , y = 0 ≤ y ≤ 3

6: x = greater than 1/3, y = All Real numbers

7: x = All Real numbers , y = greater than 0

8: x = All Real numbers , y = 0 < y ≤ 21

9: x = All real numbers , y ≥ 0

10: x > -4 , y > 0