

Name _____

Date _____

Year Group _____

Find the Domain and range of the following rational functions

1. $\frac{x-9}{\sqrt{x+9}}$

2. $\frac{x+9}{3-x}$

3. $\frac{x-9}{\sqrt{9-x}}$

Domain = _____

Domain = _____

Domain = _____

Range = _____

Range = _____

Range = _____

$\{x \in \mathbb{R}: x > -9\}$

$\{y \in \mathbb{R}\}$

$\{y \in \mathbb{R}\}$

$\{x \in \mathbb{R}: x < 9\}$

$\{x \in \mathbb{R}: x < 9\}$

$\{y \in \mathbb{R}: y > 0\}$

$\{x \in \mathbb{R}: x \neq -3\}$

$\{x \in \mathbb{R}\}$

$\{y \in \mathbb{R}\}$

$\{x \in \mathbb{R}: x \neq 3\}$

$\{y \in \mathbb{R}: y \neq 1\}$

$\{y \in \mathbb{R}: y \neq -1\}$

4. $\frac{x+2}{\sqrt{9-x}}$

5. $\frac{x-2}{x+3}$

Domain = _____

Domain = _____

Range = _____

Range = _____

Extra Domain = _____

Extra Range = _____