Name: **Class/Set:**

Functions - Domain and Range

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1: Give the domain.

a) $g(x) = \dfrac{1 - 7x}{4x}$ b) $f(x) = \dfrac{-7x - 5}{x - 1}$ c) $h(x) = \dfrac{-5x - 9}{5x - 2}$ d) $f(x) = \dfrac{-8}{x} - 5$

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2: Give the domain.

a) $g(x) = 7\sqrt{x} + 6$ b) $h(x) = \sqrt{\left(\dfrac{-x + 10}{4}\right)}$ c) $g(x) = \sqrt{(-3x - 9)}$ d) $h(x) = \sqrt{\left(\dfrac{-x}{2}\right)} - 5$

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3: Give the domain.

a) $f(x) = \dfrac{2x - 5}{3x - 9}$ b) $g(x) = \sqrt{\left(\dfrac{x - 9}{6}\right)}$ c) $f(x) = 9\sqrt{x} - 3$ d) $h(x) = \dfrac{x + 7}{x - 4}$

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4: What values must be excluded from the domain?

a) $h(x) = \frac{1}{-5-4x}$ b) $g(x) = \frac{10}{x+6}$ c) $f(x) = \frac{1-4x}{6x}$ d) $g(x) = \frac{2x-3}{6x-5}$

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5: What values must be excluded from the domain?

a) $f(x) = \sqrt{(-4x+5)}$ b) $h(x) = \sqrt{\left(\frac{-x}{2}\right)} + 3$ c) $h(x) = 8\sqrt{x} - 4$ d) $g(x) = \sqrt{(-5x-3)}$

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6: What values must be excluded from the domain?

a) $f(x) = \frac{x+4}{x-3}$ b) $g(x) = \sqrt{\left(\frac{x-6}{8}\right)}$ c) $h(x) = \sqrt{\left(\frac{x}{2}\right)} + 7$ d) $f(x) = \frac{5x+5}{x-1}$

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Answers: Functions - Domain and Range

1:	a) $x \neq 0$	b) $x \neq 1$	c) $x \neq \frac{2}{5}$	d) $x \neq 0$
2:	a) $x \geq 0$	b) $x \leq 10$	c) $x \leq -3$	d) $x \leq 0$
3:	a) $x \neq 3$	b) $x \geq 9$	c) $x \geq 0$	d) $x \neq 4$
4:	a) $x = -\frac{5}{4}$	b) $x = -6$	c) $x = 0$	d) $x = \frac{5}{6}$
5:	a) $x > \frac{5}{4}$	b) $x > 0$	c) $x < 0$	d) $x > -\frac{3}{5}$
6:	a) $x = 3$	b) $x < 6$	c) $x < 0$	d) $x = 1$