Find the domain for

(a) $f(x) = \dfrac{x-2}{\sqrt{x^2-3x+2}}$

$x-2$ polynomial

Possible problem area $x^2-3x+2 > 0$

$x-1$	$-$	$+$	$+$
$x+2$	$-$	$-$	$+$

$+$ 1 2 $+$

$(-\infty, 1) \cup (2, \infty)$

$x \in \mathbb{R}$ $x < 1$; $x > 2$

(b) $f(x) = \sqrt{3x} - \sqrt{2-x}$

$\sqrt{3x}$ ↑ $x \geq 0$

$2 - x \geq 0$

$2 \geq x$

$x \leq 2$

$[0, 2]$ ← note sq bracket

c) $f(x) = \dfrac{x^2+3}{\sqrt{x^2-9}}$ ← polynomial

$(x-3)(x+3) > 0$

$x-3$	$-$	$-$	$+$
$x+3$	$-$	$+$	$+$

-3 3

$(-\infty, -3) \cup (3, \infty)$

what if $f(x) = \dfrac{x^2+3}{\sqrt{9-x^2}}$