10-3-19 4th Try

Domain: X values we are using

Give me a math equation where all values work except $x \neq 5$.

$f(x) = \frac{200}{x-5}$ $\frac{10}{2x-10}$

$\frac{2}{5-x}$

Give one where $x \neq 15$

$f(x) = \frac{\quad}{x-15}$ ← top doesn't matter

① Give the domain of

$f(x) = \frac{50x}{2x-4}$

$2x-4 \neq 0$
$+4 \quad +4$
$\frac{2x}{2} \neq \frac{4}{2}$
$x \neq 2$

R except $x \neq 2$

② Give domain for

$f(x) = \frac{100x^{258}}{3x-17}$

$3x-17 \neq 0$
$+17 \quad +17$
$\frac{3x}{3} \neq \frac{17}{3}$
$x \neq 5\frac{2}{3}$ $(5.\overline{6})$

③ Domain for $f(x)=\sqrt{x-5}$

$x-5\geq 0$

$+5 \quad +5$

$x\geq 5$

④ Domain of $f(x)=\sqrt{3x-1}$

$3x-1\geq 0$

$+1 \quad +1$

$\frac{3x}{3}\geq\frac{1}{3}$

$x\geq\frac{1}{3}$

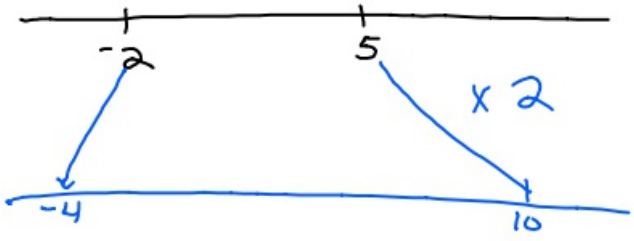
⑤ Domain of $f(x)=\sqrt{-2x+10}$

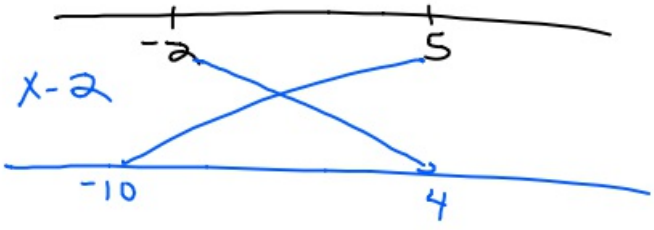
$-2x+10\geq 0$

$-10 \quad -10$

$\frac{-2x}{-2}\geq\frac{-10}{-2}$

$x\leq 5$





⑥ Domain of $f(x) = 8x - 8$

$\mathbb{R}$

Coupon 1	Coupon 2
$10 off	20% off

Shirt $100

Coupon 1: Shirt now $90

Coupon 2 Shirt now $72

Coupon 2: Shirt now $80

Coupon 1: Shirt now $70.

$f(x) = 3x + 2$ $g(x) = 5x - 10$

⑦ $f(g(3))$ $g(3) = 5 \cdot 3 - 10 = 5$

$f(5) = 3(5) + 2$

$= 17$

⑧ $g(f(3))$ $f(3) = 3 \cdot 3 + 2 = 11$

$g(11) = 5 \cdot 11 - 10$

45