**Solving Quadratic Inequalities**

Solve these inequalities.

(a) $\left(x-3\right)\left(x-6\right)>0$

(b) $\left(x-3\right)\left(x-6\right)<0$

(c) $\left(x+3\right)\left(x-6\right)<0$

(d) $\left(x+3\right)\left(x+4\right)\geq 0$

(e) $x\left(x+3\right)>0$

(f) $\left(2x-1\right)\left(x+3\right)<0$

Solve these inequalities.

(a) $x^{2}-6x-16>0$

(b) $x^{2}+7x+12\geq 0$

(c) $x^{2}-7x+12<0$

(d) $x^{2}-9x+20>0$

(e) $x^{2}-16<0$

(f) $x^{2}-9x<0$

Solve these inequalities.

(a) $x^{2}-2x>35$

(b) $x^{2}+2x<48$

(c) $2x^{2}>11x-12$

(d) $16x-x^{2}\leq 6x$

Find the solution sets for these inequalities.

(a) $\frac{x^{2}+12}{2}>4x$

(b) $\left(x-3\right)\left(2x+3\right)<2x\left(1-2x\right)-5$

(c) $(x+5)^{2}\geq 1$

(d) $(5-x)(x+3)\leq 1$

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