Name - _ _ _ _ _ _ _ _

Start time - _ _ : _ _

End time - _ _ : _ _

Solve the following.

Consider the inequality $x^2 > 16$.

a) Rearrange the inequality into the form $f(x) > 0$, where $f(x)$ is a quadratic expression.

b) (i) Factorise $f(x)$.

(ii) Write down the x-coordinates of the points where the graph of $y = f(x)$ crosses the x-axis.

c) Hence solve the inequality $x^2 > 16$.

Solve each quadratic inequality and show the solution on a number line.

a) $x^2 < 4$

b) $x^2 < 1$

c) $x^2 \leq 9$

d) $x^2 > 25$

e) $x^2 \geq 36$

f) $x^2 > 64$

g) $x^2 < 100$

h) $x^2 \leq 49$

Find the integer solutions to these inequalities. Give your answers using set notation.

a) $2x^2 < 18$

b) $3x^2 \leq 75$

c) $5x^2 < 80$

d) $2x^2 \leq 72$

1   2   3   4   5   6   7   8   9