# 9.2: The Parabola

## Attendance Quiz

1. Fill in the *four* missing equations from the "Equation" column of the folowing table.

| Equations of parabolas with vertex $(h, k)$ and axis of symmetry parallel to a coordinate axis, $a > 0$ | | | | | |
|---|---|---|---|---|---|
| Equation | Axis of Symmetry | | Opens | Focus | Directrix |
| | vertical | $x = h$ | up<br>down | $(h, k + a)$<br>$(h, k - a)$ | $y = k - a$<br>$y = k + a$ |
| | horizontal | $y = k$ | right<br>left | $(h + a, k)$<br>$(h - a, k)$ | $x = h - a$<br>$x = h + a$ |

2. Write (using lowercase $x$ and $y$) the equation of the parabola with focus at $(-\frac{3}{4}, 2)$ and directrix $x = -\frac{5}{4}$.