# King Fahd University of Petroleum and Minerals
## Prep-Year Math Program
## Math 002 - Term 151
## Recitation (10.1)

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**Question 1:**

Find the equation of the parabola with directrix $x=4$ and focus $(0,-3)$

**Answer:** $(y+3)^2=-8(x-2)$

**Question 2**

Find the equation in standard form of the parabola that has vertex $(-4,1)$, has its axis of symmetry parallel to the $x-$axis, and passes through the point $(4,\ 3)$.

**Answer:** $(y-1)^2=\frac{1}{2}(x+4)$

**Question 3**

Find the vertex, focus, and directrix of the parabola given by the equation:

$6x-3y^2-12y+4=0$.

**Answer:** $\text{vertex}=(-\frac{8}{3},-2)$ $\quad focus=\left(-\frac{13}{6},-2\right)$ $\quad Directrix:\ x=-\frac{19}{6}$

**Question 4**

If $y=m$ is the equation of the directrix of the parabola $(3x+6)^2=18y-36$ then

A) $m=2$ B) $m=-\frac{3}{2}$ C) $m=-\frac{1}{2}$

D) $m=\frac{3}{2}$ E) $m=\frac{5}{2}$

**Answer:** $\Rightarrow$ $\boxed{y=\frac{3}{2}}$

**Question5:**

Which of the following points lies on the parabola with vertex $(1,1)$ and focus $(1,3)$.

A) $(0,1)$ B) $(2,5)$ C) $(5,3)$

D) $\left(\frac{9}{8},\ 2\right)$ E) $(-1,3)$

**Answer:** $(5,3)$