Algebra lesson 10 quiz

1) i) Draw the following graphs on the same grid

a) $y = x^2$

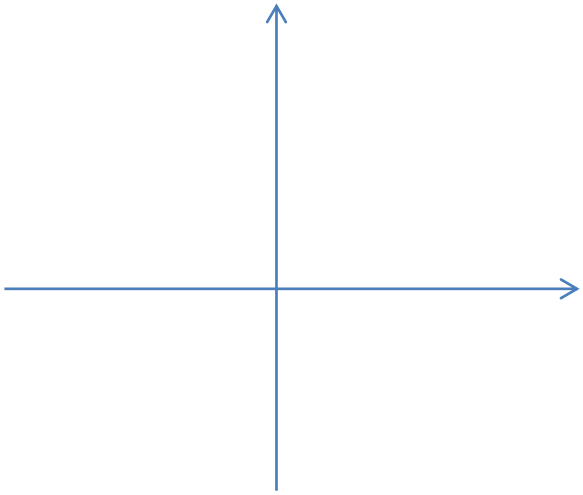
| | | | | | |
|---|---|---|---|---|---|
| X | | | | | |
| Y | | | | | |

b) $y = 2x^2$

| | | | | | |
|---|---|---|---|---|---|
| X | | | | | |
| Y | | | | | |

c) $y = 0.5x^2$

| | | | | | |
|---|---|---|---|---|---|
| X | | | | | |
| Y | | | | | |



ii) Describe what the coefficient $a$ does in the formula $y = ax^2$

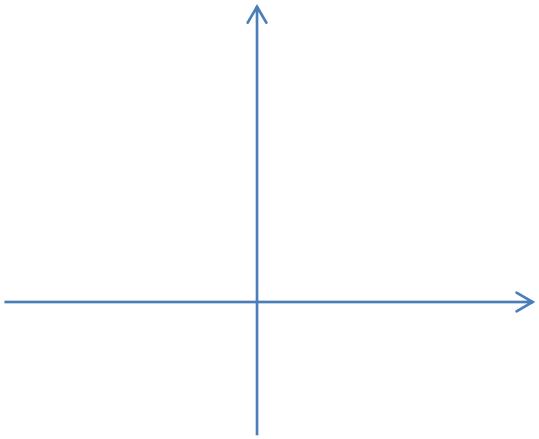
2) i) Draw the following graphs on the same grid:

a) $y = (x - 1)^2$

| | | | | | |
|---|---|---|---|---|---|
| X | | | | | |
| Y | | | | | |

b) $y = (x + 2)^2$

| | | | | | |
|---|---|---|---|---|---|
| X | | | | | |
| Y | | | | | |



ii) Describe what the constant $b$ does in the formula $y = (x - b)^2$

Please turn over

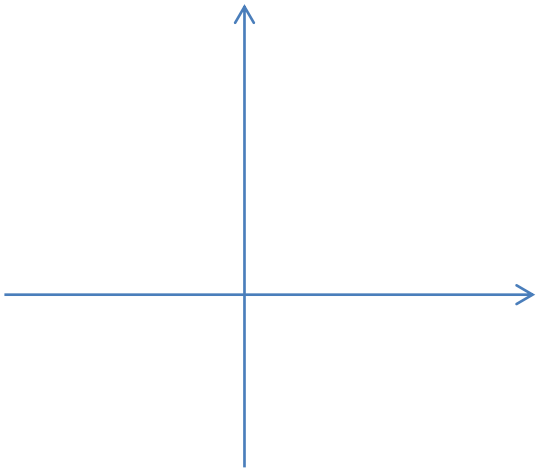
3) i) Draw the following equations on the same grid

a. $y = x^2 + 2$

| | | | | | |
|---|---|---|---|---|---|
| X | | | | | |
| Y | | | | | |

b. $y = x^2 - 3$

| | | | | | |
|---|---|---|---|---|---|
| X | | | | | |
| Y | | | | | |



ii) Describe what the constant $c$ does in the formula $y = x^2 + c$

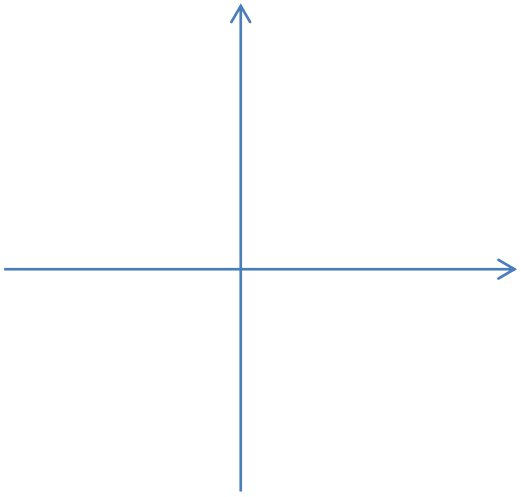
4) i) Draw the following equations on the same grid

a. $y = 2(x + 2)^2 - 3$

| | | | | | |
|---|---|---|---|---|---|
| X | | | | | |
| Y | | | | | |

b. $y = -2(x - 1)^2 + 2$

| | | | | | |
|---|---|---|---|---|---|
| X | | | | | |
| Y | | | | | |



c. From the general formula $y = a(x - b)^2 + c$

- Describe the effects of $a, b$, and $c$
- Describe how to find the turning point of the graph from $b$ and $c$