Y9 – Autumn – Block 1 – Step 1 – Lines parallel to the axis, $y = x$ and $y = -x$

<table>
<tr><th>Question</th><th>Answer</th></tr>
<tr><td>1</td><td>a) All points plotted correctly and joined together.
Points should be marked as a cross (×).
Line may be drawn across the whole grid.
b) All of the y-coordinates are -3
They join to make the line $y = -3$
c) e.g. (0, 8) (7, 8) (100, 8)</td></tr>
<tr><td>2</td><td>$x = 0$
$6 = y$ ✔
$6y = 2$ ✔
$3y + 8 = 0$ ✔</td></tr>
<tr><td>3</td><td>a) Straight vertical line drawn through the x-axis at 2
b) E.g. (2, 3) , (2, -1), (2, -0.5)
“All of the x-coordinates are equal to 2”
c) E.g. (2,-10) y-coordinate must be greater than 4 or less than -4
d) Straight horizontal line drawn through the y-axis at 2
e) (2, 1)</td></tr>
<tr><td>4</td><td>$y = -5$
$x = -5$ ✔
$x = 9$
$y = 9$ ✔</td></tr>
<tr><td>5</td><td>a)
<table>
<tr><td>x</td><td>-3</td><td>-2</td><td>-1</td><td>0</td><td>1</td><td>2</td><td>3</td></tr>
<tr><td>y</td><td>3</td><td>2</td><td>1</td><td>0</td><td>-1</td><td>-2</td><td>-3</td></tr>
</table>
b) Line drawn correctly.
c) Line drawn correctly.
d) Same: e.g. y-intercept, both cross through the origin.
Different: e.g. one line increase and the other decreases from left to right.</td></tr>
<tr><td>6</td><td>a) Always. The x and y values are equal for all points on the line(s).
b) Sometimes. It depends on the scale used on the axes.
c) Never. 4th Quadrant x is positive and y is negative. Since $y = x$, x and y will be either both positive or both negative.</td></tr>
<tr><td>7</td><td>(5.6, 5.6) ✔ $(3a, a + 2a)$ ✔
$(120, 60^2)$ $(0.3, \frac{1}{3})$</td></tr>
<tr><td>8</td><td>$A = \frac{a^2}{2}$</td></tr>
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