Question 1: True/False [1]
The equation of the straight line parallel to the x-axis and passing through the point \((-2; 4)\) is \(x = -2\).

TRUE    FALSE

Question 2 refers to the following graphic

[Diagram showing points A and B with coordinates (-7; -5) and (0; -5) respectively.]

Figure 1: AG0003

Question 2: Multiple Choice [2]
AB in the given graph is translated 5 units to the right and 6 units up. Which one of the following sketches shows the correct new position of AB?

A

[Diagram showing option A with A at (-2; 1) and B at (5; 1).]

B

[Diagram showing option B with A at (-1; 0) and B at (6; 0).]
Question 3 refers to the following graphic

When point $P$ in this sketch is reflected about the $y$-axis, it will lie in the … quadrant.

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Question 4 refers to the following graphic
**Question 4: Multiple Choice  [4]**

DEFG is a rectangle with vertices as given on the sketch. This rectangle is reflected about the x-axis. Which one of the following sketches shows the image of DEFG?

A

B

C
Question 5: True/False [4]
The vertices of parallelogram ABCD are A(7; −5), B(2; 3), C(−2; −3) and D(3; −11).

If M is the point of intersection of the diagonals of ABCD, then the coordinates of M will be \((2\frac{1}{2}; -4)\).

**TRUE**  **FALSE**

Question 6 refers to the following graphic

![Diagram of triangle PQR with vertices P(5; 8), Q(5; 2), R(7; 2)](image)

**Question 6: Cloze [6]**

In the given sketch, PQR is a right-angled triangle with vertices P(5; 8), Q(5; 2) and R(7; 2) given.

If this triangle is reflected about the line PQ, the new coordinates of R will be (Ans. 1).
If the original triangle is reflected about the y-axis, the new coordinates of R will be (Ans. 2).
If the original triangle is reflected about the x-axis, the new coordinates of R will be (Ans. 3).

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**Question 7 refers to the following graphic**
Question 7: Cloze [3]
In the given sketch, the point $A(-1; 4)$ has been transformed in three different ways.

The point $B$ is the image of $A$ by the transformation (Ans. 1).
The point $C$ is the image of $A$ by the transformation (Ans. 2).
The point $D$ is the image of $A$ by the transformation (Ans. 3).

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- reflection about the $y$-axis
- reflection about the $x$-axis
- reflection about the line $y = x$
- rotation $90^\circ$ clockwise about the origin
- rotation $90^\circ$ anticlockwise about the origin
- rotation $180^\circ$ about the origin
- translation four units vertically down
- translation six units horizontally to the right

Question 8: Cloze [2]
In the equation $y = mx + c$, the gradient is represented by the value of (Ans. 1) and the $y$-intercept is represented by the value of (Ans. 2).

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- $y$
- $m$
- $x$
- $c$

Question 9: Socrates [6]
If the distance from $(x; -3)$ to the origin is 5 units, then $x$ will be equal to ...

[If there is more than one value, use a semi-colon to separate the numbers, e.g. 6 ; 2]
Question 10: Socrates [3]
A straight line passes through the point \((2; -3)\) and has a slope of 4.
The equation of this straight line will be ...

[Give the equation in standard form.]

Question 11: Multiple Choice [2]
The intercepts of \(x = 7y - 24\) with the axes is given by ...

A \(x = 1; \ y = 7\)
B \(x = -24; \ y = 3 \frac{3}{7}\)
C \(x = -24; \ y = -24\)
D \(x = \frac{1}{7}; \ y = \frac{7}{24}\)

Question 12: Multiple Choice [3]
If \(P\) and \(Q\) are the points \((-2; 3)\) and \((5; 1)\) respectively, then the distance between \(P\) and \(Q\) is equal to ...

A \(\sqrt{13}\)
B \(\sqrt{25} = 5\)
C \(\sqrt{45}\)
D \(\sqrt{53}\)

Question 13: Socrates [5]
\(A\) \((-1; 9)\), \(B\) \((2; -3)\) and \(C\) \((8; b)\) are points in the Cartesian plane.
If these three points are collinear, then the value of \(b\) will be equal to ...

[Give the number only.]

Question 14: Cloze [3]
The point \(A\) \((3; -2)\) is to be transformed in three different ways.

The point \(B\) \((3; 2)\) is the image of \(A\) by the transformation (Ans. 1).
The point \(C\) \((-3; -2)\) is the image of \(A\) by the transformation (Ans. 2).
The point \(D\) \((-2; 3)\) is the image of \(A\) by the transformation (Ans. 3).
Reflection about the $y$-axis  
Reflection about the $x$-axis  
Reflection about the line $y = x$

Rotation about the $y$-axis  
Rotation about the $x$-axis  
Rotation about the origin

Translation four units vertically down  
Translation six units horizontally to the right

**Question 15: Socrates [4]**

If $A (-4; 2)$ and $B (6; 4)$ are two points on a straight line, then the coordinates of $T (x; y)$ which divide $AB$ in the ratio $1:1$ are ...