This is a multiple-choice test.
There are 24 questions, and you have 12 minutes to do the test.
Hidden Shapes

For each of the following questions, the shape on the left is hidden in one of the five shapes on the right of the line (and it is exactly the same size and same way round where it is hidden). All of its sides are visible in the shape where it is hiding. Which of the five shapes contains the shape on the left?

1.

```
\[ \begin{array}{c|ccccc}
\text{a} & \text{b} & \text{c} & \text{d} & \text{e} \\
\hline
\text{shape on the left} & \\
\end{array} \]
```

2.

```
\[ \begin{array}{c|ccccc}
\text{a} & \text{b} & \text{c} & \text{d} & \text{e} \\
\hline
\text{shape on the left} & \\
\end{array} \]
```

3.

```
\[ \begin{array}{c|ccccc}
\text{a} & \text{b} & \text{c} & \text{d} & \text{e} \\
\hline
\text{shape on the left} & \\
\end{array} \]
```
**Paper Folding**

Each of these questions is about folding paper and punching holes in it. You must decide how the paper would look when it is unfolded. Choose which of the five squares beneath the folded squares shows how the paper would look when it is unfolded.

1.

![Folding Diagram 1]

2.

![Folding Diagram 2]
3.
Block Counting

Each of these questions is about counting the number of blocks in a pile. Each block in the pile is the same size and shape. Some blocks are hidden from view but must be there to hold the visible blocks up. Choose the answer that shows the total number of blocks in the pile.

1.

13  10  12  11  14
A   B   C   D   E
2.

![Image of a 3D structure with numbers 16, 18, 19, 17, 15 and options A, B, C, D, E]

3.

![Image of a 3D structure with numbers 19, 20, 22, 23, 21 and options A, B, C, D, E]
Matching Shape

For each of these questions, one of the five shapes on the right matches the shape on the left i.e. it is the same as the shape on the left, but it has been spun round. The other four shapes on the right do not match the shape on the left because they have been picked up and turned over, as well as possibly spun round. Choose the answer that shows the matching shape.

1.

2.

3.
Jigsaw

Each of these questions is a jigsaw question where you have to add two jigsaw sections to form the complete shape to the left of the equals sign. You have to find the missing section which forms the complete shape when added to the jigsaw section to the right of the equals sign. The missing section may have to be spun around to make it fit. Choose the missing section from the five options.

1. 

![Image of jigsaw question 1]

2. 

![Image of jigsaw question 2]

3. 

![Image of jigsaw question 3]
Combining Shapes

Each of the following questions is about combining shapes. The shape on the left is the base shape and the shapes to the right of it are combined with the base shape (by being added to or subtracted from the base shape). The final combined shape may finish up rotated from its original position.

The base shape is marked with one or more of the letters X, Y and Z. The shapes to the right of it are also marked with one of these letters. The way in which the shapes on the right are combined with the base shape is that the sides with matching letters must meet. Choose the answer that shows the combined shape.

1.

```
    Y
  +   Y
  ?
```

A  B  C  D  E
2. 

\[ \text{Y} - \text{Y} = ? \]

3. 

\[ \text{Y} \quad \text{X} + \quad \text{X} \quad \text{Y} = ? \]

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4.

\[
\begin{align*}
&\begin{array}{cc}
 & Y \\
X &
\end{array} + \\
&\begin{array}{c}
X
\end{array} - \\
&\begin{array}{c}
Y
\end{array} = ?
\end{align*}
\]

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A  B  C  D  E

5.

\[
\begin{align*}
&\begin{array}{cc}
 & Z \\
X & Y
\end{array} + \\
&\begin{array}{c}
X
\end{array} + \\
&\begin{array}{c}
Y
\end{array} - \\
&\begin{array}{c}
Z
\end{array} = ?
\end{align*}
\]

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A  B  C  D  E
6.

\[ \begin{align*}
&\text{X} \quad \text{Z} \\
&\text{Y} \\
\end{align*} + \begin{align*}
&\text{X} \\
\end{align*} - \begin{align*}
&\text{Y} \\
\end{align*} - \begin{align*}
&\text{Z} \\
\end{align*} = ?
\]

\[ \begin{align*}
&A \\
&B \\
&C \\
&D \\
&E \\
\end{align*} \]

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