


Non-Verbal Reasoning 2

Read the following with your child:

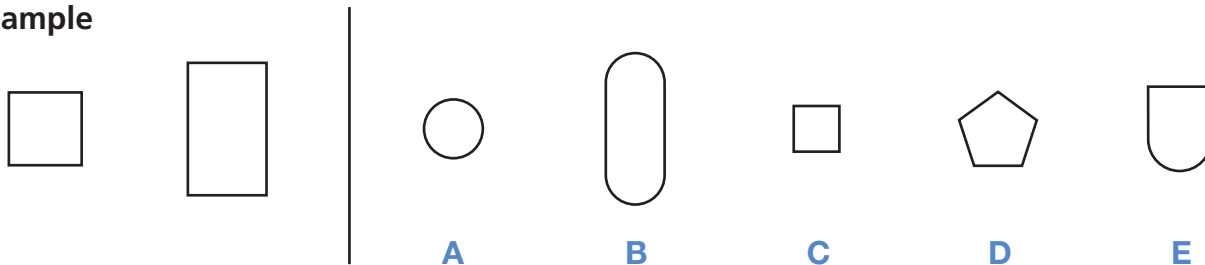
1. This is a multiple-choice paper in which you have to mark your answer to each question on the separate answer sheet. You should mark only one answer for each question.
 2. Draw a firm line clearly through the rectangle next to your answer like this . If you make a mistake, rub it out as completely as you can and put in your new answer.
 3. There are four sections in this paper. Each section starts with an explanation of what to do followed by a worked example with the answer already marked on the answer sheet. Each section also contains some practice questions. Solutions to the example and practice questions are provided.
 4. Be sure to keep your place in the correct section on the answer sheet. Mark your answer in the box that has the same number as the question in the booklet.
 5. You may find some of the questions difficult. If you cannot do a question, **do not waste time on it but go on to the next**. If you are not sure of an answer, choose the one you think is best.
 6. **Work as quickly and as carefully as you can.**
-

Familiarisation

Section 1

On the left of the example below there are two figures that are alike. On the right there are five more figures: one of these is **most like** the two figures on the left and its letter has been marked on your answer sheet.

Example

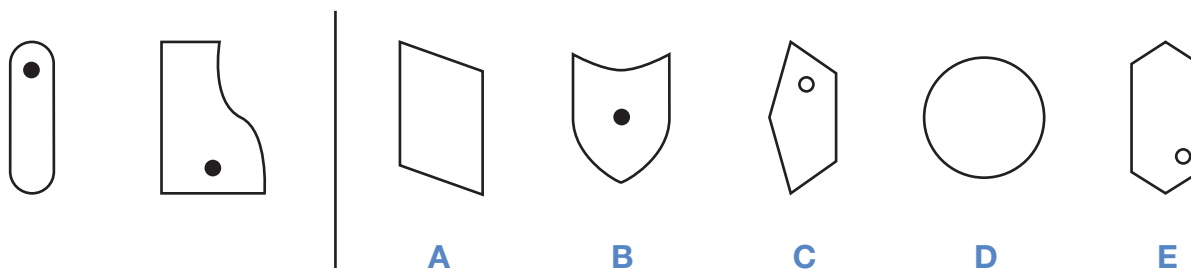


Answer: C

The two shapes on the left are alike in having four sides. They are not identical (the dimensions of the sides vary) but what they share in common is having four sides.

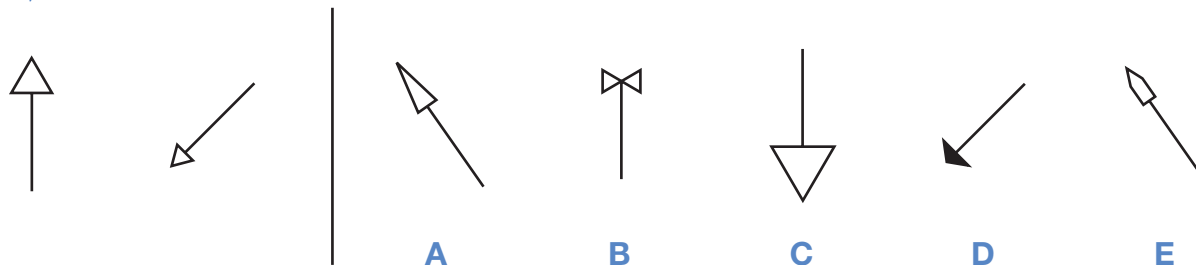
Now do the two practice questions below.

P1

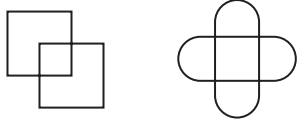
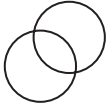



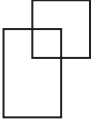
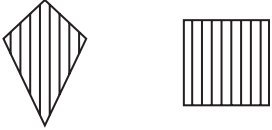


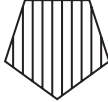


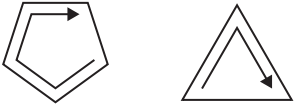

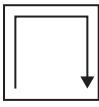


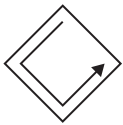
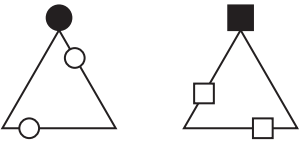
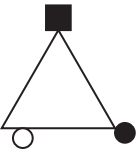

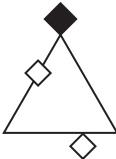
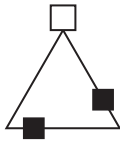









The two figures on the left both contain a small black circle. Only one of the five figures on the right, option **B**, also contains a small black circle, so this is the correct answer.

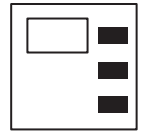
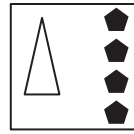
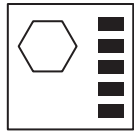
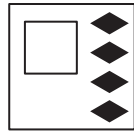
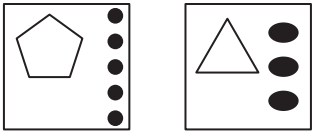
P2



The two figures on the left have an arrow with an arrowhead which is an unshaded equilateral triangle (a triangle in which all three sides are equal). Only answer option **C** has an unshaded equilateral triangle as the arrowhead. The size of the arrowhead is irrelevant and so is the direction in which the arrow is pointing.

<p>1</p> 	     <p>A B C D E</p>
<p>2</p> 	     <p>A B C D E</p>
<p>3</p> 	     <p>A B C D E</p>
<p>4</p> 	     <p>A B C D E</p>
<p>5</p> 	     <p>A B C D E</p>

6



A

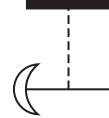
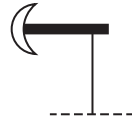
B

C

D

E

7



A

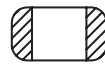
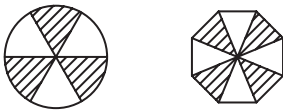
B

C

D

E

8



A

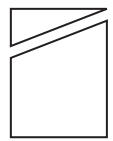
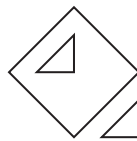
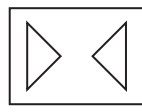
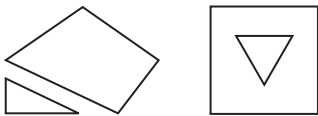
B

C

D

E

9



A

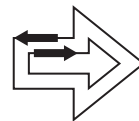
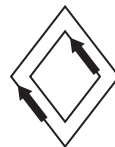
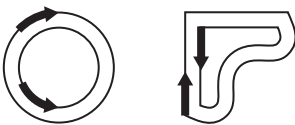
B

C

D

E

10



A

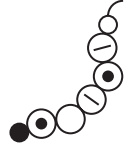
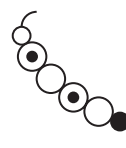
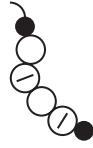
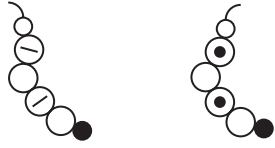
B

C

D

E

11



A

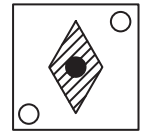
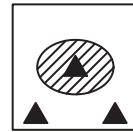
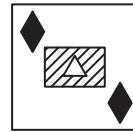
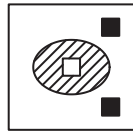
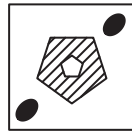
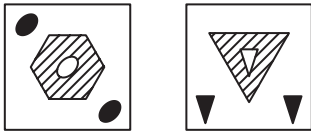
B

C

D

E

12



A

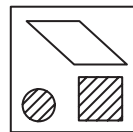
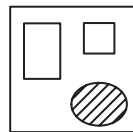
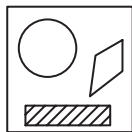
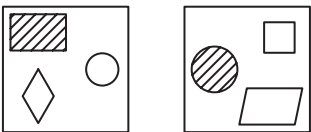
B

C

D

E

13



A

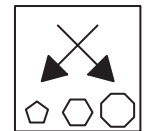
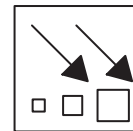
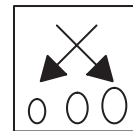
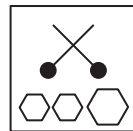
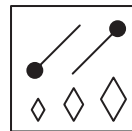
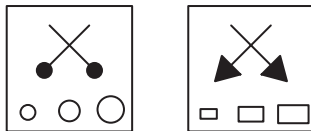
B

C

D

E

14



A

B

C

D

E

15



A

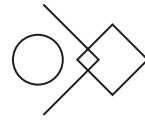
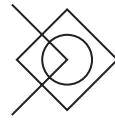
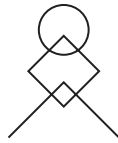
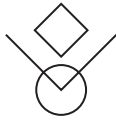
B

C

D

E

16



A

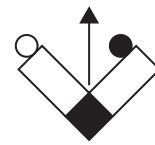
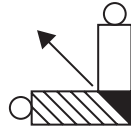
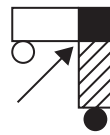
B

C

D

E

17



A

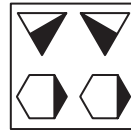
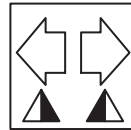
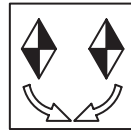
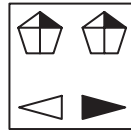
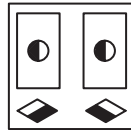
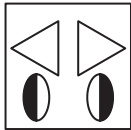
B

C

D

E

18



A

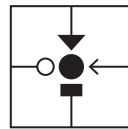
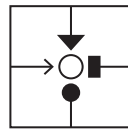
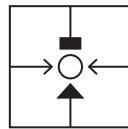
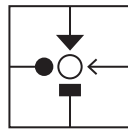
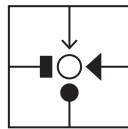
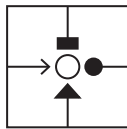
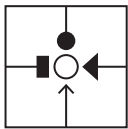
B

C

D

E

19



A

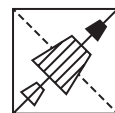
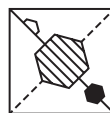
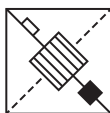
B

C

D

E

20



A

B

C

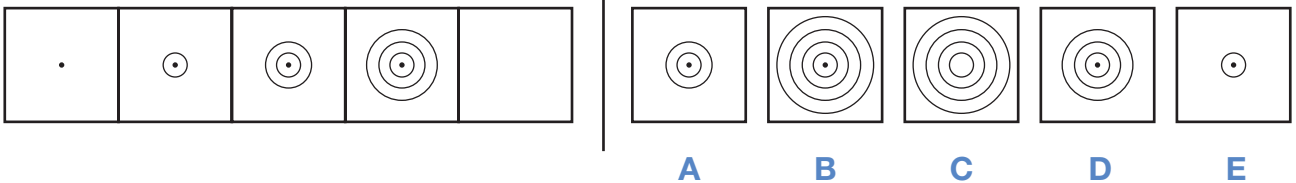
D

E

Section 2

To the left in the example below there are five squares arranged in order. One of these squares has been left empty. One of the five squares on the right should **take the place** of the empty square and its letter has been marked on your answer sheet.

Example

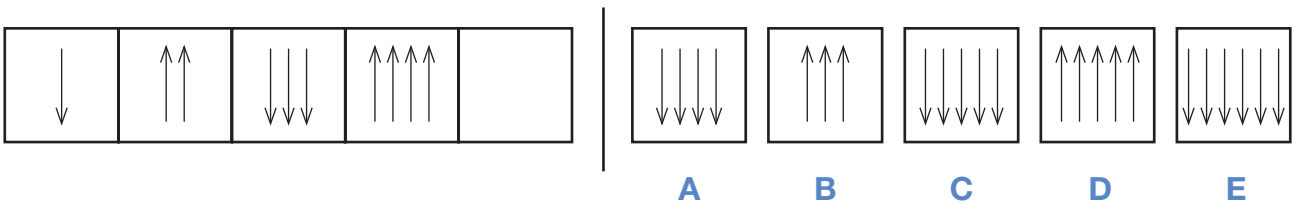


Answer: B

As you move through the series, the dot acquires an extra ring around it, increasing the overall size of the circle each time. The central dot is present in each cell.

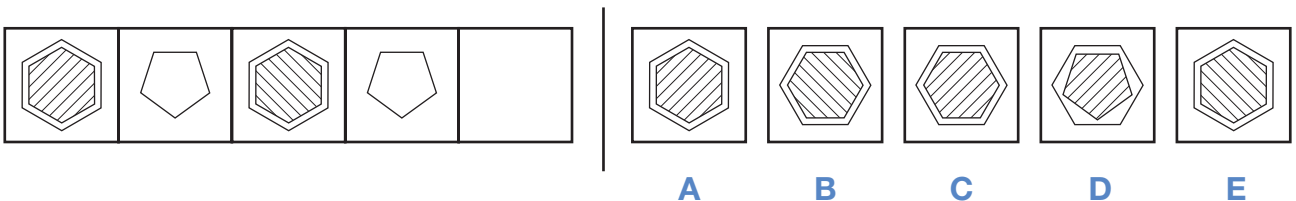
Now do the two practice questions below.

P1



This series has two rules: firstly, an arrow is added each time and, secondly, the direction of the arrows alternates, pointing downwards then upwards etc. Therefore, the missing square should have five arrows pointing downwards, as in answer option **C**.

P2



In this series, the image changes across every other square so the pattern for 1, 3 and 5 is independent from squares 2 and 4. We can see that the pattern for 2 and 4 remains the same: the five-sided shape doesn't change. The pattern for 1, 3 and 5 shows that the six-sided shape is always positioned the same way but the direction of the diagonal lines alternates. In square 5 they will be slanting right, as in answer option **A**.

21



A

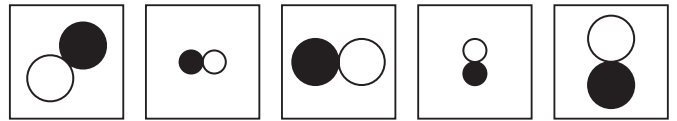
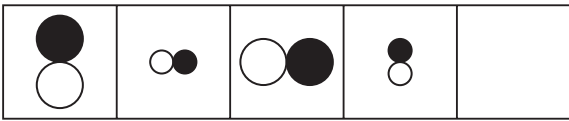
B

C

D

E

22



A

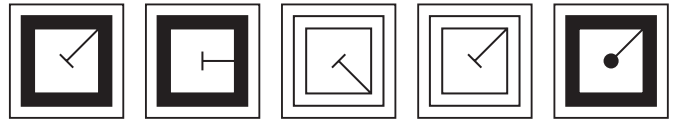
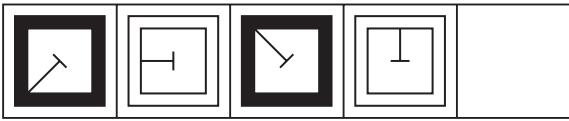
B

C

D

E

23



A

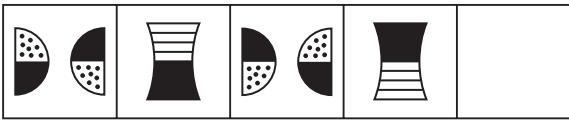
B

C

D

E

24



A

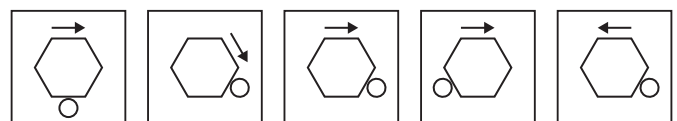
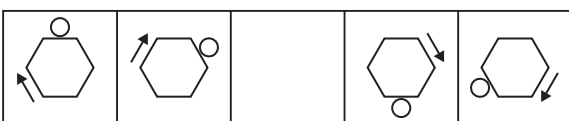
B

C

D

E

25



A

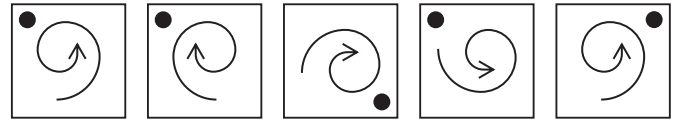
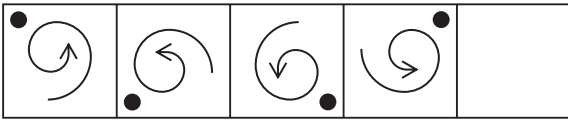
B

C

D

E

26



A

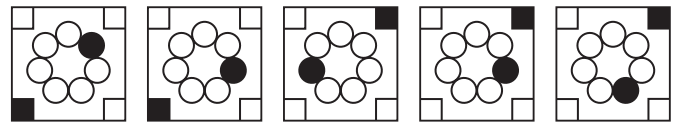
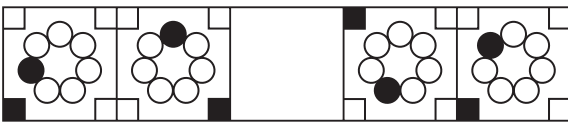
B

C

D

E

27



A

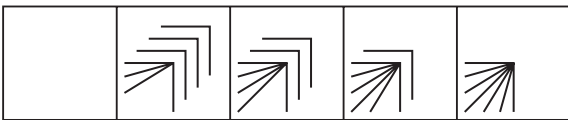
B

C

D

E

28



A

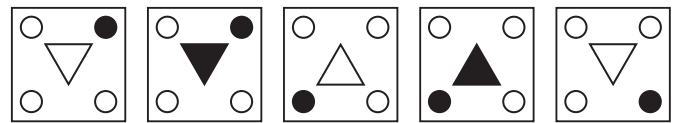
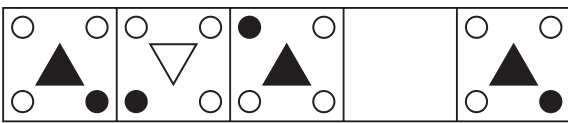
B

C

D

E

29



A

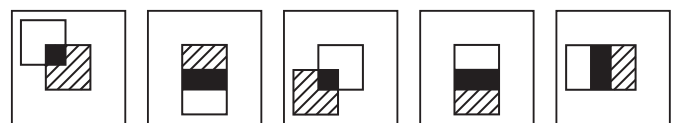
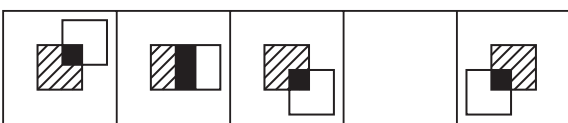
B

C

D

E

30



A

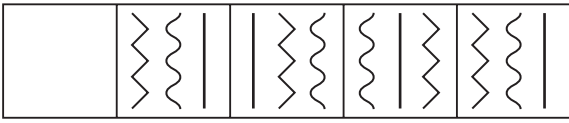
B

C

D

E

31



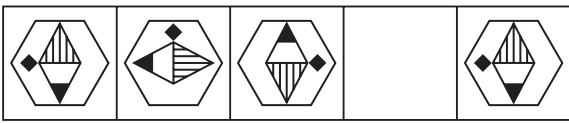
A B C D E

32



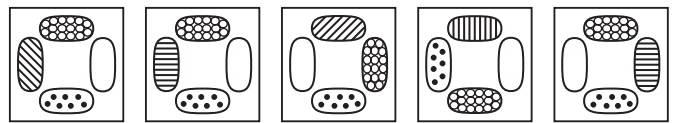
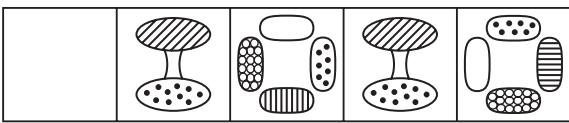
A B C D E

33



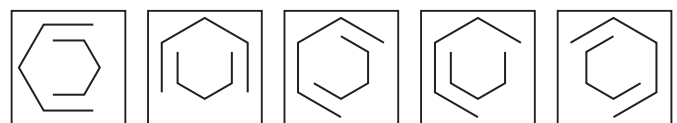
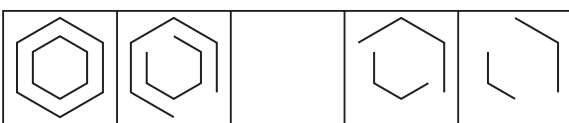
A B C D E

34



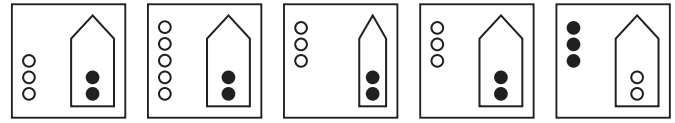
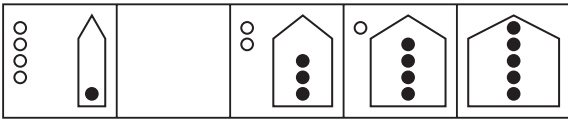
A B C D E

35



A B C D E

36



A

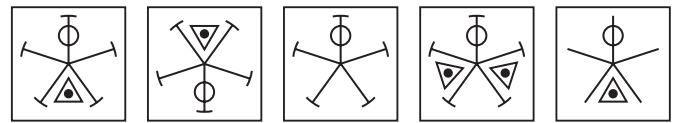
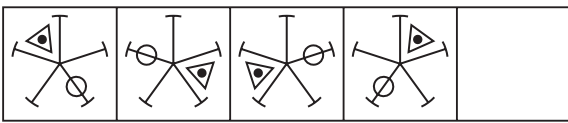
B

C

D

E

37



A

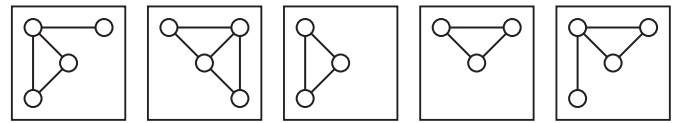
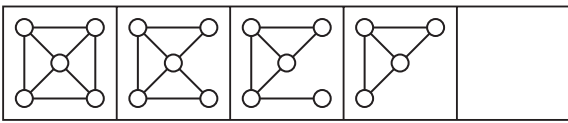
B

C

D

E

38



A

B

C

D

E

39



A

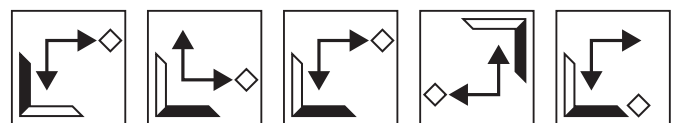
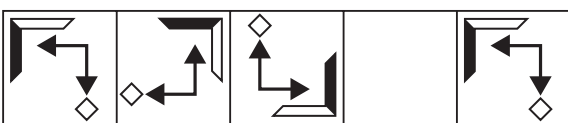
B

C

D

E

40



A

B

C

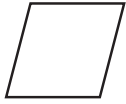
D

E

Section 3

In the example below there are five figures. One of these figures is **most unlike** the other four and its letter has been marked on your answer sheet.

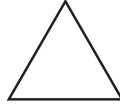
Example



A



B



C



D



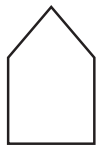
E

Answer: B

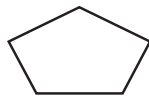
In this example, all the figures are white except for the black circle. Therefore **B** is the correct answer as it is the only one of the five figures that is unlike the others.

Now do the two practice questions below.

P1



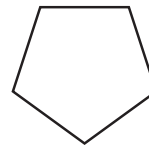
A



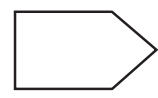
B



C



D



E

In this question, all the figures have five sides except for option **C** which has four sides.

P2



A



B



C



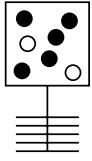
D



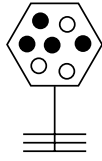
E

In this question, all the arrows (irrespective of their line style or fill) are pointing upwards except for option **D** which is pointing downwards.

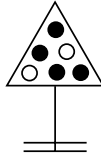
41



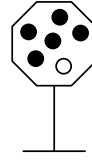
A



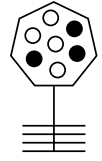
B



C



D



E

42



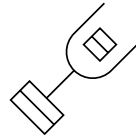
A



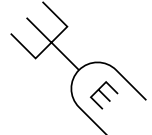
B



C

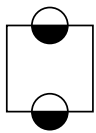


D



E

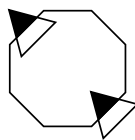
43



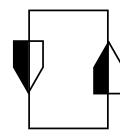
A



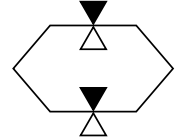
B



C

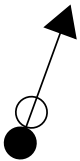


D



E

44



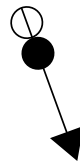
A



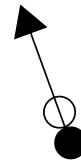
B



C

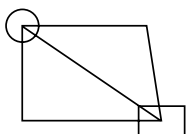


D

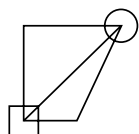


E

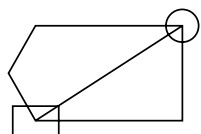
45



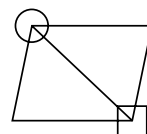
A



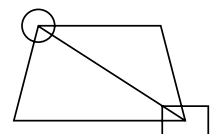
B



C

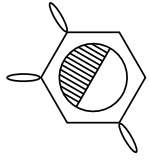


D



E

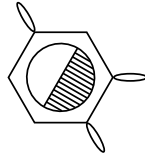
46



A



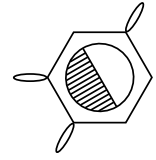
B



C

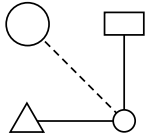


D

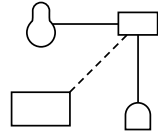


E

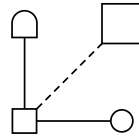
47



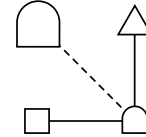
A



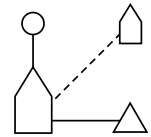
B



C

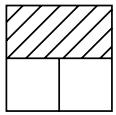


D

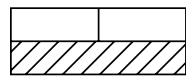


E

48



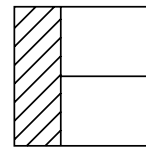
A



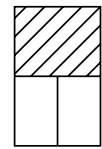
B



C

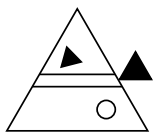


D

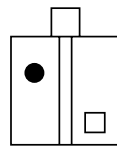


E

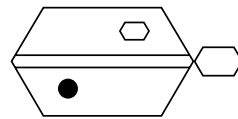
49



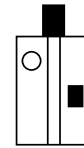
A



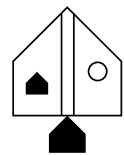
B



C



D



E

50



A



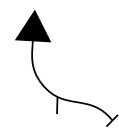
B



C

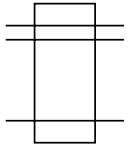


D

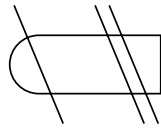


E

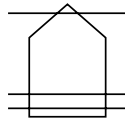
51



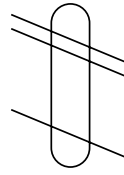
A



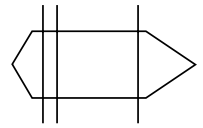
B



C

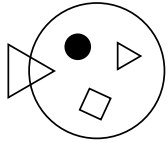


D



E

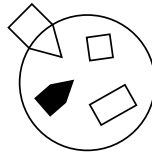
52



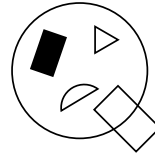
A



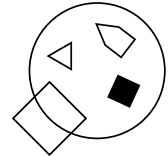
B



C

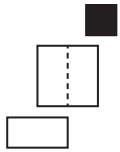


D

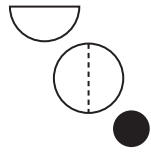


E

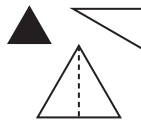
53



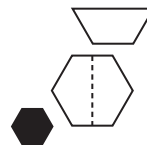
A



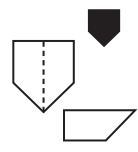
B



C

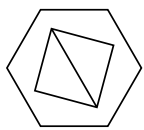


D

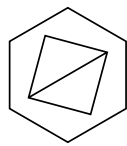


E

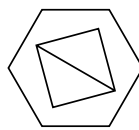
54



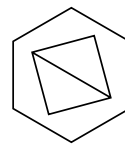
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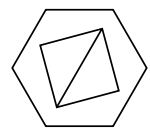
B



C

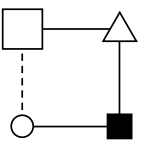


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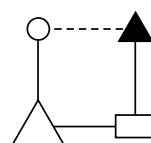


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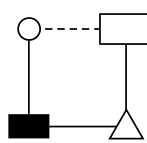
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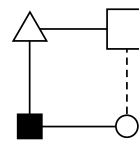
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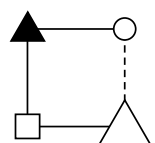
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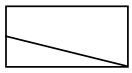


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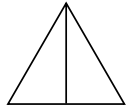


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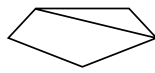
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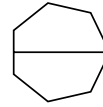
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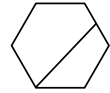
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C

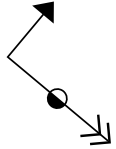


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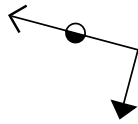


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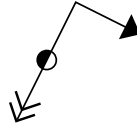
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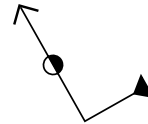
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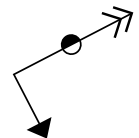
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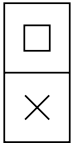


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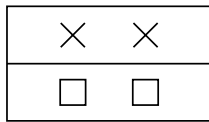


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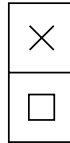
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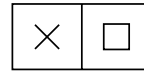
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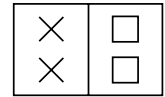
B



C

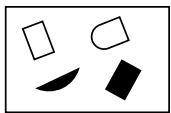


D



E

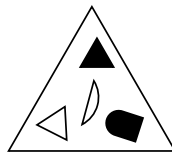
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A



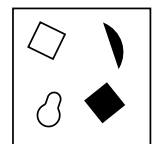
B



C

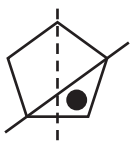


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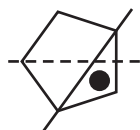


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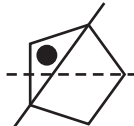
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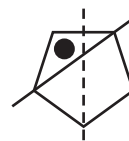
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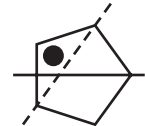
B



C



D





E

Section 4

To answer these questions you have to work out a code. On the left of the example below are some shapes and the codes that go with them. You must decide how the code letters go with the shapes. Then find the correct code for the **test shape** from the set of five codes on the right. Its letter has been marked on your answer sheet.

Example

	SX		Test shape					
	SY			SZ	TY	TX	ST	TZ
	TZ		A	B	C	D	E	





Answer: A

Decide what the code letters mean. The **first letter** is the same for both shaded shapes, so S must be the code for shading and T the code for white. The **second letter** is different for each shape, so X, Y and Z must be the codes for arrow, square and diamond. Therefore the test shape must have an S code for shading and a Z code for diamond. So the answer is SZ and **A** has been marked on the answer sheet.

Now do the two practice questions below.

Remember there is a new code for each question.

P1

	XJ			XK	XJ	YK	XY	YJ
	XK		A	B	C	D	E	
	YJ							

In this question, the answer is **C** because the test shape must have a Y code for being a rounded shield and a K code for being a small shield.

P2



LP



MQ



MP



LM

LP

MQ

LQ

MP

A


























B


























C

D



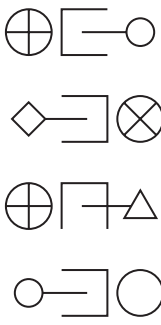





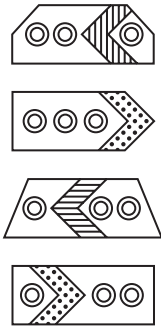

E

In this question, the answer is **D** because the test shape must have an L code for the black dot at the centre of the shape and a Q code for being a hexagon (a six-sided figure).

<p>61</p> <p> VPJ</p> <p> WQK</p> <p> XPL</p> <p> YRJ</p>	<p> XRK VQL XRL YQJ WPK</p> <p style="text-align: center;">A B C D E</p>
<p>62</p> <p> KRV</p> <p> LSW</p> <p> MTX</p> <p> NRW</p>	<p> LRX KTW MTV NSW MSV</p> <p style="text-align: center;">A B C D E</p>
<p>63</p> <p> FKP</p> <p> GLQ</p> <p> HLR</p> <p> GMP</p>	<p> HKR GKQ FMP HLQ GLR</p> <p style="text-align: center;">A B C D E</p>
<p>64</p> <p> JPV</p> <p> KQW</p> <p> LPV</p> <p> MRW</p>	<p> MRV JQW MQV KPW JRV</p> <p style="text-align: center;">A B C D E</p>
<p>65</p> <p> FJP</p> <p> GKQ</p> <p> GLR</p> <p> FMQ</p>	<p> FJR GKP FMR GJP GMP</p> <p style="text-align: center;">A B C D E</p>

<p>66</p>  KQW  LRX  LQY  MSW	 <p>KRX MQY LSX MQW KSY</p> <p>A B C D E</p>
<p>67</p>  JPS  KPT  JQS  LRT	 <p>JQT KQS LPT KRS JRT</p> <p>A B C D E</p>
<p>68</p>  MRV  NSW  MTX  ORW	 <p>MTW NRX NTV OSW MSV</p> <p>A B C D E</p>
<p>69</p>  JPV  KQW  LPX  MQV	 <p>JQX LPV KPW JQW LQV</p> <p>A B C D E</p>
<p>70</p>  JQX  KRY  LSZ  KTX	 <p>KQY K SZ LQY JRY LTY</p> <p>A B C D E</p>

<p>71</p> <p>JPW KQX LRY KPZ</p>	<p>LPX JRZ JQZ LRW KQW</p> <p>A B C D E</p>
<p>72</p> <p>FKQ FLR HMS GKR</p>	<p>GMR FLQ GKS HKQ FKR</p> <p>A B C D E</p>
<p>73</p> <p>JMW KNX JNY LMX</p>	<p>LNX JMX LMW KNY LNW</p> <p>A B C D E</p>
<p>74</p> <p>FJP GKQ FLR HJQ</p>	<p>HLQ FJR HKP GJQ GKP</p> <p>A B C D E</p>
<p>75</p> <p>KQU LRV MSW NSU</p>	<p>LSU KRW NQU LRW MQV</p> <p>A B C D E</p>

<p>76</p>  <p>JPT KQU LRV MQT</p>	 <p>JRU LRU JRV KPT JQU</p> <p>A B C D E</p>
<p>77</p>  <p>SLX TMY VNX SMZ</p>	 <p>TLZ VMZ VLY TNX SNY</p> <p>A B C D E</p>
<p>78</p>  <p>XKP YLQ ZKQ YMR</p>	 <p>YKQ ZLP XLR ZMP XMQ</p> <p>A B C D E</p>
<p>79</p>  <p>KQX LRY MRZ KSY</p>	 <p>KRX LSY KQZ MSZ LQY</p> <p>A B C D E</p>
<p>80</p>  <p>FKP GLQ HMR FLS</p>	 <p>FMR GKS GMP HKQ HLS</p> <p>A B C D E</p>

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