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# UCAT ABSTRACT REASONING QUESTION PACK 1 (MARK SCHEME)

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(ART10015)

1. Answer: **Set B**
2. Answer: **Neither**
3. Answer: **Set B**
4. Answer: **Set A**
5. Answer: **Set A**

Explanation:

Set A: If even number of shapes, there's a patterned circle in the bottom right corner. If odd number of shapes, there's no patterned circle in the bottom right corner.

Set B: If odd number of shapes, there's a patterned square in the bottom left corner. If even number of shapes, there's no patterned square in the bottom left corner.

(ART20007)

6. Answer: **A**

Explanation:

The pattern is that the total number of sides is always 12. Initially 1 x 12, then 2 x 6, then 3 x 4 so the final box should be made up of 4 3 sided shapes. These 4 shapes should be both identical and black - box A is the only one which fulfills these criteria.

(AR30007)

7. Answer: **D**

Explanation:

The shape with the most sides is removed and the grey shapes change to white shapes, paralleling to logic in the change from box 1 to 2.



(ART10027)

8. Answer: **Neither**

9. Answer: **Neither**

10. Answer: **Set B**

11. Answer: **Set A**

Explanation:

Set A: White shapes with an even number of sides and black shapes have an odd number of sides.

Set B: Black shapes with an even number of sides and white shapes with an even number of sides.

(ART10017)

12. Answer: **Set A**

13. Answer: **Neither**

14. Answer: **Neither**

15. Answer: **Set B**

16. Answer: **Set B**

Explanation:

Set A: The number of sides on the black shape(s) minus the number of sides on the white shape(s) equals the number of sides on the grey shape(s).

Set B: The number of sides on the white shape(s) minus the number of sides on the black shape(s) equals the number of sides on the grey shape(s).



(ART20008)

17. Answer: **C**

Explanation:

The number of sides goes up in prime numbers.

(ART10023)

18. Answer: **Neither**

19. Answer: **Neither**

20. Answer: **Neither**

21. Answer: **Set B**

22. Answer: **Set A**

Explanation:

Set A: Twice as many arrows up as down.

Set B: Twice as many arrows left as right.

(ART30008)

23. Answer: **D**

Explanation:

The shape is rotated  $90^\circ$  and the shaded part becomes unshaded and vice versa.





(ART10028)

24. Answer: **Set B**

25. Answer: **Neither**

26. Answer: **Neither**

27. Answer: **Set A**

28. Answer: **Neither**

Explanation:

Set A: Black circle and a grey equilateral triangle.

Set B: Grey circle and a black right-angled triangle.

The white arrows are irrelevant and a distractor.

(ART30011)

29. Answer: **C**

Explanation:

The shapes have moved 1 position clockwise and rotated by 90 degrees clockwise. The colouring has changed in keeping with the pattern of white to black.

(ART30018)

30. Answer: **A**

Explanation:

Two shapes are removed and the box is then reflected along the vertical axis.



(ART10020)

- 31. Answer: **Set A**
- 32. Answer: **Neither**
- 33. Answer: **Set B**
- 34. Answer: **Neither**
- 35. Answer: **Set B**

Explanation:

Set A: There is always a circle. If it is white, the total number of shapes is even. If it is grey, the total number of shapes is odd.

Set B: There is always a heart. If it is white, there are an odd total number of shapes. If it is grey, there are an even total number of shapes.

(ART10024)

- 36. Answer: **Set A**
- 37. Answer: **Neither**
- 38. Answer: **Set B**
- 39. Answer: **Neither** (heptagons)
- 40. Answer: **Set A**

Explanation:

Set A: Two hexagons in each box.

Set B: Three hexagons in each box.





(ART10010)

- 41. Answer: **Set A**
- 42. Answer: **Neither**
- 43. Answer: **Neither**
- 44. Answer: **Set B**
- 45. Answer: **Neither**

Explanation:

Set A: Maths sign included.

Set B: Currency sign included.

(ART10025)

- 46. Answer: **Neither**
- 47. Answer: **Set B**
- 48. Answer: **Set A**
- 49. Answer: **Neither**

Explanation:

Set A: 2 up, 1 down.

Set B: 2 right, 1 left.





(ART10022)

50. Answer: **Neither**

51. Answer: **Set B**

52. Answer: **Neither**

53. Answer: **Set A**

54. Answer: **Neither**

Explanation:

Set A: Black circle and any other shapes have at least 1 curved side.

Set B: White triangle and any other shapes have only straight sides.

(ART10022)

55. Answer: **C**

Explanation: The total number of shapes increases in triangle numbers – 1,3,5,9.

Therefore the fourth line should have 4 circles on it. The pattern of colouring goes from white to grey to black to blue.

