Deduce

Input output reasoning questions with answers

12 exam-shaped questions with full worked solutions.

For IBPS · SBI · RRB · SSC reasoning.

Free, share it forward. Every question in this set was generated and verified by the Deduce engine — the same one behind the free daily puzzle round at **deducepuzzles.com**.

The questions

Work them on paper first. Full solutions start after question 12 — the numbering matches.

QUESTION 1

A machine rearranges an input line of words and numbers step by step, following one fixed rule (study the sample below). What is Step II for the New Input?

Sample Input: 19 piano island 79 24 Step I: 19 24 piano island 79 Step II: 19 24 79 piano island Step II is the last step of the sample. New Input: candle 66 72 house 29

A. 66 72 29 house candle
B. 66 72 29 candle house
C. candle house 29 66 72
D. 29 66 candle 72 house
E. 72 66 candle house 29

QUESTION 2

A machine rearranges an input line of words and numbers step by step, following one fixed rule (study the sample below). How many steps does the machine need to complete the arrangement of the New Input?

Sample Input: iron zebra 67 37 66 Step I: 37 iron zebra 67 66 Step II: 37 66 iron zebra 67 Step III: 37 66 67 iron zebra Step III is the last step of the sample. New Input: river 43 pearl 88 18

A. 5
B. 1
C. 2
D. 4
E. 3

QUESTION 3

A machine rearranges an input line of words and numbers step by step, following one fixed rule (study the sample below). How many steps does the machine need to complete the arrangement of the New Input?

Sample Input: 69 65 mango forest 11 wagon Step I: mango 69 65 forest 11 wagon Step II: mango wagon 69 65 forest 11 Step III: mango wagon forest 69 65 11 Step III is the last step of the sample. New Input: 31 garden stone 84 98 grape

A. 3
B. 1
C. 2
D. 4
E. 5

QUESTION 4

A machine rearranges an input line of words and numbers step by step, following one fixed rule (study the sample below). What is Step II for the New Input?

Sample Input: ocean 77 32 jungle 66 garden Step I: ocean garden 77 32 jungle 66 Step II: ocean garden jungle 77 32 66 Step II is the last step of the sample. New Input: 41 flute 80 orbit 12 rock

A. 41 80 12 flute orbit rock
B. rock orbit 41 flute 80 12
C. flute orbit 12 rock 41 80
D. 80 41 12 flute orbit rock
E. rock flute 41 80 orbit 12

QUESTION 5

A machine rearranges an input line of words and numbers step by step, following one fixed rule (study the sample below). How many steps does the machine need to complete the arrangement of the New Input?

Sample Input: 43 30 14 lamp candle quilt Step I: lamp 43 30 14 candle quilt Step II: lamp quilt 43 30 14 candle Step III: lamp quilt candle 43 30 14 Step III is the last step of the sample. New Input: 27 46 jungle yard zebra 71

A. 5
B. 3
C. 1
D. 4
E. 2

QUESTION 6

A machine rearranges an input line of words and numbers step by step, following one fixed rule (study the sample below). How many steps does the machine need to complete the arrangement of the New Input?

Sample Input: quilt 81 92 forest 57 pearl river Step I: pearl quilt 81 92 forest 57 river Step II: pearl quilt river 81 92 forest 57 (Only the first 2 steps of the sample are shown; the machine continues until the arrangement is complete.) New Input: 32 mango hill 73 lotus lamp 51

A. 6
B. 3
C. 5
D. 4
E. 2

QUESTION 7

A machine rearranges an input line of words and numbers step by step, following one fixed rule (study the sample below). What is Step II for the New Input?

Sample Input: bridge 23 grape 83 60 Step I: 23 bridge grape 83 60 Step II: 23 60 bridge grape 83 Step III: 23 60 83 bridge grape Step III is the last step of the sample. New Input: valley 20 61 island 50

A. 20 50 valley 61 island
B. 20 61 50 valley island
C. 20 island valley 61 50
D. valley island 20 50 61
E. island 20 valley 61 50

QUESTION 8

A machine rearranges an input line of words and numbers step by step, following one fixed rule (study the sample below). What is Step II for the New Input?

Sample Input: 35 97 bridge 74 drum Step I: 35 bridge 74 drum 97 Step II: 35 bridge drum 74 97 Step III: bridge drum 35 74 97 Step III is the last step of the sample. New Input: 49 73 needle 72 lotus

A. lotus needle 49 72 73
B. needle lotus 49 73 72
C. 49 needle lotus 72 73
D. 49 lotus 72 73 needle
E. lotus needle 49 73 72

QUESTION 9

A machine rearranges an input line of words and numbers step by step, following one fixed rule (study the sample below). How many steps does the machine need to complete the arrangement of the New Input?

Sample Input: 72 jungle 36 kettle wagon 52 Step I: wagon 72 jungle 36 kettle 52 Step II: wagon jungle 72 36 kettle 52 Step III: wagon jungle kettle 72 36 52 Step III is the last step of the sample. New Input: 65 81 62 queen house garden

A. 1
B. 5
C. 4
D. 3
E. 2

QUESTION 10

A machine rearranges an input line of words and numbers step by step, following one fixed rule (study the sample below). What is Step II for the New Input?

Sample Input: pearl 84 bridge orbit 42 25 Step I: orbit pearl 84 bridge 42 25 Step II: orbit pearl bridge 84 42 25 Step II is the last step of the sample. New Input: 40 jam valley piano 85 73

A. jam 40 piano valley 85 73
B. jam piano 40 valley 85 73
C. 40 valley 85 73 piano jam
D. 40 jam 73 piano valley 85
E. 40 73 85 jam valley piano

QUESTION 11

A machine rearranges an input line of words and numbers step by step, following one fixed rule (study the sample below). How many steps does the machine need to complete the arrangement of the New Input?

Sample Input: forest 33 90 15 piano garden Step I: piano forest 33 90 15 garden Step II: piano forest garden 33 90 15 Step II is the last step of the sample. New Input: 20 59 kettle jam kite 83

A. 4
B. 2
C. 3
D. 1
E. 5

QUESTION 12

A machine rearranges an input line of words and numbers step by step, following one fixed rule (study the sample below). What is Step II for the New Input?

Sample Input: 70 river jungle yard dew 53 46 Step I: dew 70 river jungle yard 53 46 Step II: dew yard 70 river jungle 53 46 (Only the first 2 steps of the sample are shown; the machine continues until the arrangement is complete.) New Input: 72 hill 58 16 nest valley stone

A. valley stone 72 hill 58 16 nest
B. hill 16 72 58 nest valley stone
C. hill nest 16 valley stone 58 72
D. hill nest 72 58 16 valley stone
E. 16 hill 72 58 nest valley stone

Answers and worked solutions

Each walkthrough is the engine's own elimination order, step for step — not a reconstruction written after the fact.

SOLUTION 1

Answer: **29 66 candle 72 house**

1. The machine's rule: in each step the machine moves the smallest remaining number to the leftmost free position.
2. Check the rule against the sample — it reproduces every shown step, and no other standard rearrangement rule does.
3. Apply it to the new input: candle 66 72 house 29.
4. Step I: 29 candle 66 72 house
5. Step II: 29 66 candle 72 house
6. So Step II of the new input is: 29 66 candle 72 house.

SOLUTION 2

Answer: **3**

1. The machine's rule: in each step the machine moves the smallest remaining number to the leftmost free position.
2. Check the rule against the sample — it reproduces every shown step, and no other standard rearrangement rule does.
3. Apply it to the new input: river 43 pearl 88 18.
4. Step I: 18 river 43 pearl 88
5. Step II: 18 43 river pearl 88
6. Step III: 18 43 88 river pearl
7. The arrangement is complete after Step III, so the machine needs 3 steps.

SOLUTION 3

Answer: **3**

1. The machine's rule: in each step the machine moves the shortest remaining word (alphabetical order breaks a length tie) to the leftmost free position.
2. Check the rule against the sample — it reproduces every shown step, and no other standard rearrangement rule does.
3. Apply it to the new input: 31 garden stone 84 98 grape.
4. Step I: grape 31 garden stone 84 98
5. Step II: grape stone 31 garden 84 98
6. Step III: grape stone garden 31 84 98
7. The arrangement is complete after Step III, so the machine needs 3 steps.

SOLUTION 4

Answer: **rock flute 41 80 orbit 12**

1. The machine's rule: in each step the machine moves the shortest remaining word (alphabetical order breaks a length tie) to the leftmost free position.
2. Check the rule against the sample — it reproduces every shown step, and no other standard rearrangement rule does.
3. Apply it to the new input: 41 flute 80 orbit 12 rock.
4. Step I: rock 41 flute 80 orbit 12
5. Step II: rock flute 41 80 orbit 12
6. So Step II of the new input is: rock flute 41 80 orbit 12.

SOLUTION 5

Answer: **3**

1. The machine's rule: in each step the machine moves the shortest remaining word (alphabetical order breaks a length tie) to the leftmost free position.
2. Check the rule against the sample — it reproduces every shown step, and no other standard rearrangement rule does.
3. Apply it to the new input: 27 46 jungle yard zebra 71.
4. Step I: yard 27 46 jungle zebra 71
5. Step II: yard zebra 27 46 jungle 71
6. Step III: yard zebra jungle 27 46 71
7. The arrangement is complete after Step III, so the machine needs 3 steps.

SOLUTION 6

Answer: **4**

1. The machine's rule: in each step the machine moves the shortest remaining word (alphabetical order breaks a length tie) to the leftmost free position.
2. Check the rule against the sample — it reproduces every shown step, and no other standard rearrangement rule does.
3. Apply it to the new input: 32 mango hill 73 lotus lamp 51.
4. Step I: hill 32 mango 73 lotus lamp 51
5. Step II: hill lamp 32 mango 73 lotus 51
6. Step III: hill lamp lotus 32 mango 73 51
7. Step IV: hill lamp lotus mango 32 73 51
8. The arrangement is complete after Step IV, so the machine needs 4 steps.

SOLUTION 7

Answer: **20 50 valley 61 island**

1. The machine's rule: in each step the machine moves the smallest remaining number to the leftmost free position.
2. Check the rule against the sample — it reproduces every shown step, and no other standard rearrangement rule does.
3. Apply it to the new input: valley 20 61 island 50.
4. Step I: 20 valley 61 island 50
5. Step II: 20 50 valley 61 island
6. So Step II of the new input is: 20 50 valley 61 island.

SOLUTION 8

Answer: **49 needle lotus 72 73**

1. The machine's rule: in each step the machine moves the largest remaining number to the rightmost free position.
2. Check the rule against the sample — it reproduces every shown step, and no other standard rearrangement rule does.
3. Apply it to the new input: 49 73 needle 72 lotus.
4. Step I: 49 needle 72 lotus 73
5. Step II: 49 needle lotus 72 73
6. So Step II of the new input is: 49 needle lotus 72 73.

SOLUTION 9

Answer: **3**

1. The machine's rule: in each step the machine moves the shortest remaining word (alphabetical order breaks a length tie) to the leftmost free position.
2. Check the rule against the sample — it reproduces every shown step, and no other standard rearrangement rule does.
3. Apply it to the new input: 65 81 62 queen house garden.
4. Step I: house 65 81 62 queen garden
5. Step II: house queen 65 81 62 garden
6. Step III: house queen garden 65 81 62
7. The arrangement is complete after Step III, so the machine needs 3 steps.

SOLUTION 10

Answer: **jam piano 40 valley 85 73**

1. The machine's rule: in each step the machine moves the shortest remaining word (alphabetical order breaks a length tie) to the leftmost free position.
2. Check the rule against the sample — it reproduces every shown step, and no other standard rearrangement rule does.
3. Apply it to the new input: 40 jam valley piano 85 73.
4. Step I: jam 40 valley piano 85 73
5. Step II: jam piano 40 valley 85 73
6. So Step II of the new input is: jam piano 40 valley 85 73.

SOLUTION 11

Answer: **3**

1. The machine's rule: in each step the machine moves the shortest remaining word (alphabetical order breaks a length tie) to the leftmost free position.
2. Check the rule against the sample — it reproduces every shown step, and no other standard rearrangement rule does.
3. Apply it to the new input: 20 59 kettle jam kite 83.
4. Step I: jam 20 59 kettle kite 83
5. Step II: jam kite 20 59 kettle 83
6. Step III: jam kite kettle 20 59 83
7. The arrangement is complete after Step III, so the machine needs 3 steps.

SOLUTION 12

Answer: **hill nest 72 58 16 valley stone**

1. The machine's rule: in each step the machine moves the shortest remaining word (alphabetical order breaks a length tie) to the leftmost free position.
2. Check the rule against the sample — it reproduces every shown step, and no other standard rearrangement rule does.
3. Apply it to the new input: 72 hill 58 16 nest valley stone.
4. Step I: hill 72 58 16 nest valley stone
5. Step II: hill nest 72 58 16 valley stone
6. So Step II of the new input is: hill nest 72 58 16 valley stone.

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