6.4 Position, Direction and Turns: 2-hour Pack

STA NC-KS1-MATHS-STA · Calculators not allowed · about 120 minutes

Name: _____ Date: ____ / ____ / _____

Answer ALL questions. Show all your working.

1 A child stands facing east. They turn 90 degrees to their right. Which way are they facing now? (north, south, east or west)

(1)

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2 A robot stands on a square grid at column 1, row 1 (columns go across, rows go up). It moves 3 squares right, then 3 squares left, then 1 square up.

Which column and row is the robot on now? Write column then row.

Answer: column ___, row ___

(2)

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3 A robot stands on a square grid at column 3, row 1 (columns go across, rows go up). It moves 2 squares right, then 1 square up.

Which column and row is the robot on now? Write column then row.

Answer: column ___, row ___

(2)

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4 Stepping stones are numbered 1 to 20. A kangaroo stands on stone 5. It hops forward 5 stones, then back 2 stones.

Which stone is the kangaroo on now?

Answer: ___

(2)

---

5 Dev is facing east. Dev makes a half turn.

Which direction is Dev facing now?

Answer: ___

(1)

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6 Four toy animals sit in a row from left to right: dog, fish, rabbit, pig.

Which toy is between the fish and the pig?

Answer: ___

(1)

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7 A robot stands on a square grid at column 1, row 3 (columns go across, rows go up). It moves 3 squares down, then 3 squares right.

Which column and row is the robot on now? Write column then row.

Answer: column ___, row ___

(2)

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8 Four toy animals sit in a row from left to right: duck, pig, hen, fish.

Which toy is on the far right?

Answer: ___

(1)

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9 A robot faces north. It turns 180 degrees. Which way is it facing now?

(1)

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10 Four toy animals sit in a row from left to right: cow, dog, cat, bird.

Which toy is on the far right?

Answer: ___

(1)

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11 Four toy animals sit in a row from left to right: hen, duck, rabbit, bird.

Which toy is between the duck and the bird?

Answer: ___

(1)

---

12 Stepping stones are numbered 1 to 20. A kangaroo stands on stone 12. It hops forward 6 stones, then back 2 stones.

Which stone is the kangaroo on now?

Answer: ___

(2)

---

13 A robot stands on a square grid at column 3, row 3 (columns go across, rows go up). It moves 3 squares left, then 2 squares right, then 1 square left.

Which column and row is the robot on now? Write column then row.

Answer: column ___, row ___

(2)

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14 Four toy animals sit in a row from left to right: bird, cat, fish, dog.

Which toy is on the far left?

Answer: ___

(1)

---

15 Four toy animals sit in a row from left to right: pig, dog, hen, rabbit.

Which toy is on the far right?

Answer: ___

(1)

---

16 A robot stands on a square grid at column 2, row 2 (columns go across, rows go up). It moves 3 squares right, then 3 squares left, then 2 squares left.

Which column and row is the robot on now? Write column then row.

Answer: column ___, row ___

(2)

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17 A toy robot faces west. It turns 90 degrees anticlockwise. Which way is it facing now?

(1)

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18 Stepping stones are numbered 1 to 20. A grasshopper stands on stone 11. It hops forward 4 stones, then back 2 stones.

Which stone is the grasshopper on now?

Answer: ___

(2)

---

19 Stepping stones are numbered 1 to 20. A frog stands on stone 7. It hops forward 5 stones, then back 1 stone.

Which stone is the frog on now?

Answer: ___

(2)

---

20 Stepping stones are numbered 1 to 20. A frog stands on stone 12. It hops forward 5 stones, then back 2 stones.

Which stone is the frog on now?

Answer: ___

(2)

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21 Four toy animals sit in a row from left to right: cat, rabbit, cow, bird.

Which toy is on the far left?

Answer: ___

(1)

---

22 Stepping stones are numbered 1 to 20. A grasshopper stands on stone 7. It hops forward 6 stones, then back 3 stones.

Which stone is the grasshopper on now?

Answer: ___

(2)

---

23 Stepping stones are numbered 1 to 20. A frog stands on stone 8. It hops forward 4 stones, then back 4 stones.

Which stone is the frog on now?

Answer: ___

(2)

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24 Four toy animals sit in a row from left to right: pig, dog, duck, bird.

Which toy is on the far right?

Answer: ___

(1)

---

25 Stepping stones are numbered 1 to 20. A frog stands on stone 6. It hops forward 5 stones, then back 1 stone.

Which stone is the frog on now?

Answer: ___

(2)

---

26 Stepping stones are numbered 1 to 20. A kangaroo stands on stone 7. It hops forward 3 stones, then back 4 stones.

Which stone is the kangaroo on now?

Answer: ___

(2)

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27 Four toy animals sit in a row from left to right: fish, rabbit, hen, duck.

Which toy is between the rabbit and the duck?

Answer: ___

(1)

---

28 A robot stands on a square grid at column 1, row 1 (columns go across, rows go up). It moves 2 squares right, then 1 square left.

Which column and row is the robot on now? Write column then row.

Answer: column ___, row ___

(2)

---

29 Four toy animals sit in a row from left to right: cat, bird, fish, cow.

Which toy is just to the right of the cat?

Answer: ___

(1)

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30 Olu is facing west. Olu makes a half turn.

Which direction is Olu facing now?

Answer: ___

(1)

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31 A robot stands on a square grid at column 1, row 0 (columns go across, rows go up). It moves 3 squares up, then 3 squares down, then 3 squares up.

Which column and row is the robot on now? Write column then row.

Answer: column ___, row ___

(2)

---

32 Four toy animals sit in a row from left to right: hen, cow, pig, rabbit.

Which toy is between the cow and the rabbit?

Answer: ___

(1)

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33 Stepping stones are numbered 1 to 20. A rabbit stands on stone 15. It hops forward 3 stones, then back 4 stones.

Which stone is the rabbit on now?

Answer: ___

(2)

---

34 A toy train faces north. It makes a three quarter turn clockwise. Which way does it face now?

(1)

---

35 A robot stands on a square grid at column 1, row 2 (columns go across, rows go up). It moves 1 square left, then 1 square down.

Which column and row is the robot on now? Write column then row.

Answer: column ___, row ___

(2)

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36 Stepping stones are numbered 1 to 20. A kangaroo stands on stone 5. It hops forward 5 stones, then back 5 stones.

Which stone is the kangaroo on now?

Answer: ___

(2)

---

37 A robot stands on a square grid at column 1, row 3 (columns go across, rows go up). It moves 1 square left, then 1 square right.

Which column and row is the robot on now? Write column then row.

Answer: column ___, row ___

(2)

---

38 Stepping stones are numbered 1 to 20. A grasshopper stands on stone 4. It hops forward 6 stones, then back 1 stone.

Which stone is the grasshopper on now?

Answer: ___

(2)

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39 Stepping stones are numbered 1 to 20. A grasshopper stands on stone 4. It hops forward 2 stones, then back 4 stones.

Which stone is the grasshopper on now?

Answer: ___

(2)

---

40 Stepping stones are numbered 1 to 20. A rabbit stands on stone 11. It hops forward 3 stones, then back 3 stones.

Which stone is the rabbit on now?

Answer: ___

(2)

---

41 A robot stands on a square grid at column 0, row 0 (columns go across, rows go up). It moves 2 squares up, then 2 squares up, then 1 square right.

Which column and row is the robot on now? Write column then row.

Answer: column ___, row ___

(2)

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42 A puppet faces south. It turns a quarter turn anticlockwise. Which way does it face now?

(1)

---

43 Grace is facing west. Grace makes a quarter turn clockwise.

Which direction is Grace facing now?

Answer: ___

(1)

---

44 Four toy animals sit in a row from left to right: cat, dog, bird, cow.

Which toy is just to the right of the cat?

Answer: ___

(1)

---

45 Stepping stones are numbered 1 to 20. A grasshopper stands on stone 11. It hops forward 3 stones, then back 5 stones.

Which stone is the grasshopper on now?

Answer: ___

(2)

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46 Stepping stones are numbered 1 to 20. A kangaroo stands on stone 4. It hops forward 6 stones, then back 1 stone.

Which stone is the kangaroo on now?

Answer: ___

(2)

---

47 Four toy animals sit in a row from left to right: cow, pig, duck, hen.

Which toy is on the far left?

Answer: ___

(1)

---

48 7 children stand in a line, from the front: Poppy, Bella, Grace, Aaron, Layla, Uma, Ravi.

Who is third in the line?

Answer: ___

(1)

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49 Stepping stones are numbered 1 to 20. A grasshopper stands on stone 4. It hops forward 2 stones, then back 1 stone.

Which stone is the grasshopper on now?

Answer: ___

(2)

---

50 Stepping stones are numbered 1 to 20. A frog stands on stone 12. It hops forward 4 stones, then back 1 stone.

Which stone is the frog on now?

Answer: ___

(2)

---

51 On a clock face, from 12 to 3 is a quarter turn. From 3 to 9 is how many quarter turns?

(1)

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52 Four toy animals sit in a row from left to right: duck, fish, hen, cow.

Which toy is just to the right of the duck?

Answer: ___

(1)

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53 Femi is facing north. Femi makes a quarter turn clockwise.

Which direction is Femi facing now?

Answer: ___

(1)

---

54 Four toy animals sit in a row from left to right: cat, duck, dog, hen.

Which toy is on the far left?

Answer: ___

(1)

---

55 Four toy animals sit in a row from left to right: cow, fish, pig, hen.

Which toy is on the far left?

Answer: ___

(1)

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56 Four toy animals sit in a row from left to right: rabbit, bird, cow, hen.

Which toy is between the bird and the hen?

Answer: ___

(1)

---

57 Stepping stones are numbered 1 to 20. A frog stands on stone 4. It hops forward 4 stones, then back 1 stone.

Which stone is the frog on now?

Answer: ___

(2)

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Mark scheme · 6.4 Position, Direction and Turns: 2-hour Pack

A correct answer earns full marks unless the question asks for working, a method, proof or explanation.

Question 1

south cao — B1

Answer: **south**

Question 2

one move tracked correctly — M1

column 1, row 2 cao — A1

Answer: **column 1, row 2**

Question 3

one move tracked correctly — M1

column 5, row 2 cao — A1

Answer: **column 5, row 2**

Question 4

5 + 5 = 10 seen — M1

8 cao — A1

Answer: **8**

Question 5

west cao — B1

Answer: **west**

Question 6

rabbit cao — B1

Answer: **rabbit**

Question 7

one move tracked correctly — M1

column 4, row 0 cao — A1

Answer: **column 4, row 0**

Question 8

fish cao — B1

Answer: **fish**

Question 9

south cao — B1

Answer: **south**

Question 10

bird cao — B1

Answer: **bird**

Question 11

rabbit cao — B1

Answer: **rabbit**

Question 12

12 + 6 = 18 seen — M1

16 cao — A1

Answer: **16**

Question 13

one move tracked correctly — M1

column 1, row 3 cao — A1

Answer: **column 1, row 3**

Question 14

bird cao — B1

Answer: **bird**

Question 15

rabbit cao — B1

Answer: **rabbit**

Question 16

one move tracked correctly — M1

column 0, row 2 cao — A1

Answer: **column 0, row 2**

Question 17

south cao — B1

Answer: **south**

Question 18

11 + 4 = 15 seen — M1

13 cao — A1

Answer: **13**

Question 19

7 + 5 = 12 seen — M1

11 cao — A1

Answer: **11**

Question 20

12 + 5 = 17 seen — M1

15 cao — A1

Answer: **15**

Question 21

cat cao — B1

Answer: **cat**

Question 22

7 + 6 = 13 seen — M1

10 cao — A1

Answer: **10**

Question 23

8 + 4 = 12 seen — M1

8 cao — A1

Answer: **8**

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Question 24

bird cao — B1

Answer: **bird**

Question 25

6 + 5 = 11 seen — M1

10 cao — A1

Answer: **10**

Question 26

7 + 3 = 10 seen — M1

6 cao — A1

Answer: **6**

Question 27

hen cao — B1

Answer: **hen**

Question 28

one move tracked correctly — M1

column 2, row 1 cao — A1

Answer: **column 2, row 1**

Question 29

bird cao — B1

Answer: **bird**

Question 30

east cao — B1

Answer: **east**

Question 31

one move tracked correctly — M1

column 1, row 3 cao — A1

Answer: **column 1, row 3**

Question 32

pig cao — B1

Answer: **pig**

Question 33

15 + 3 = 18 seen — M1

14 cao — A1

Answer: **14**

Question 34

west cao — B1

Answer: **west**

Question 35

one move tracked correctly — M1

column 0, row 1 cao — A1

Answer: **column 0, row 1**

Question 36

5 + 5 = 10 seen — M1

5 cao — A1

Answer: **5**

Question 37

one move tracked correctly — M1

column 1, row 3 cao — A1

Answer: **column 1, row 3**

Question 38

4 + 6 = 10 seen — M1

9 cao — A1

Answer: **9**

Question 39

4 + 2 = 6 seen — M1

2 cao — A1

Answer: **2**

Question 40

11 + 3 = 14 seen — M1

11 cao — A1

Answer: **11**

Question 41

one move tracked correctly — M1

column 1, row 4 cao — A1

Answer: **column 1, row 4**

Question 42

east cao — B1

Answer: **east**

Question 43

north cao — B1

Answer: **north**

Question 44

dog cao — B1

Answer: **dog**

Question 45

11 + 3 = 14 seen — M1

9 cao — A1

Answer: **9**

Question 46

4 + 6 = 10 seen — M1

9 cao — A1

Answer: **9**

Question 47

cow cao — B1

Answer: **cow**

Question 48

Grace cao — B1

Answer: **Grace**

Question 49

4 + 2 = 6 seen — M1

5 cao — A1

Answer: **5**

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Question 50

12 + 4 = 16 seen	M1
15 cao	A1

Answer: **15**

Question 51

2 cao	B1

Answer: **2**

Question 52

fish cao	B1

Answer: **fish**

Question 53

east cao	B1

Answer: **east**

Question 54

cat cao	B1

Answer: **cat**

Question 55

cow cao	B1

Answer: **cow**

Question 56

cow cao	B1

Answer: **cow**

Question 57

4 + 4 = 8 seen	M1
7 cao	A1

Answer: **7**

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