Yr 2 Puzzles and problems Unit 1 (2801)

Additional teacher instructions for practice sheets

These notes indicate which practice sheets are most appropriate for which groups.

Day 1 Skittles Sheet 1
Working towards ARE

Day 1 Hoopla and skittles Sheet 2
Working at ARE / Greater Depth

Day 2 Make 10 Sheet 1
Working towards ARE / Working at ARE

Day 2 Down the snake Sheet 2
Greater Depth

Day 3 Tens frustration Sheet 1
Working towards ARE / Working at ARE / Greater Depth
Working towards ARE / Working at ARE can use a 0 to 100 beaded line (see resources) to help them keep track of their running total.

Day 4 Number lines Sheet 1
Working towards ARE

Day 4 Number lines Sheet 2
Working at ARE / Greater Depth

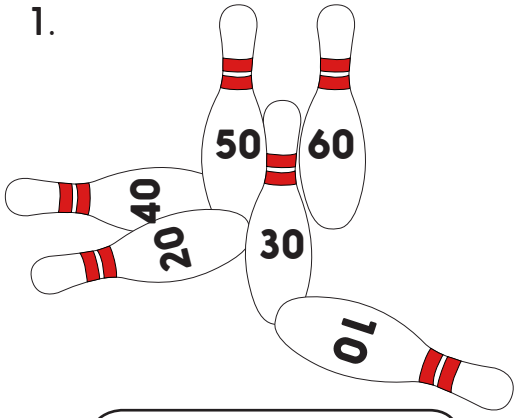
Day 5 Maths words Sheet 1
Working towards ARE / Working at ARE / Greater Depth
Working towards ARE minimum of 3 cards.
Working at ARE / Greater Depth minimum of 5 cards.

Skittles

Sheet 1

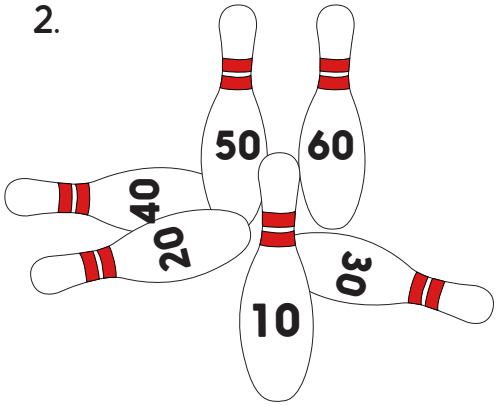
Work out the total score for each game of skittles.

1.



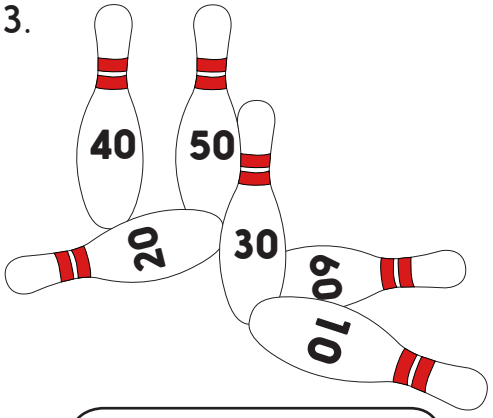
Total

2.



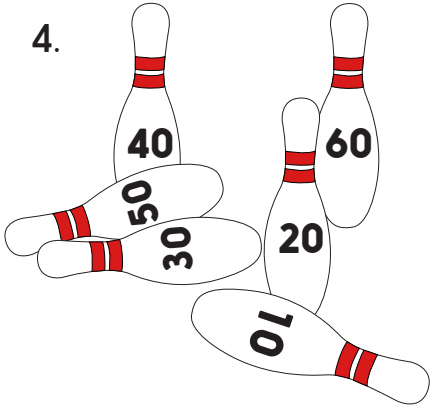
Total

3.



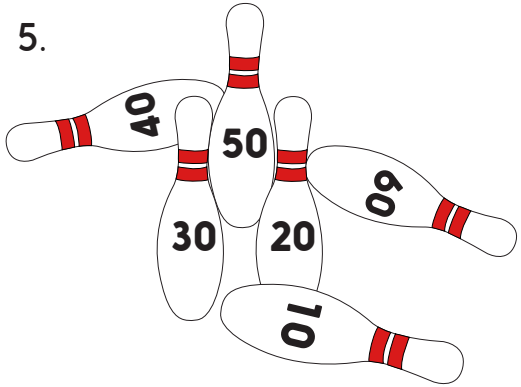
Total

4.



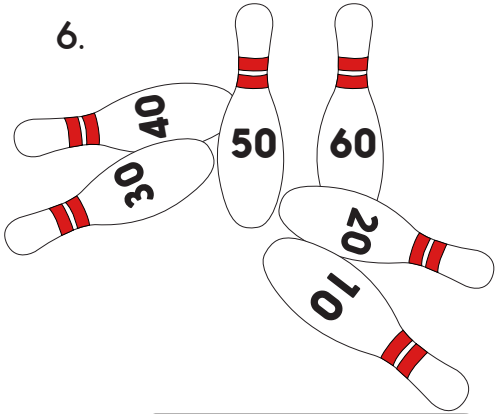
Total

5.



Total

6.

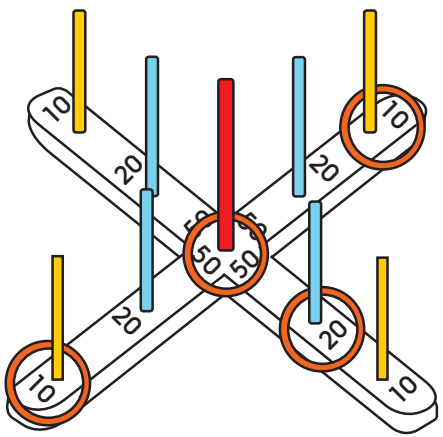


Total

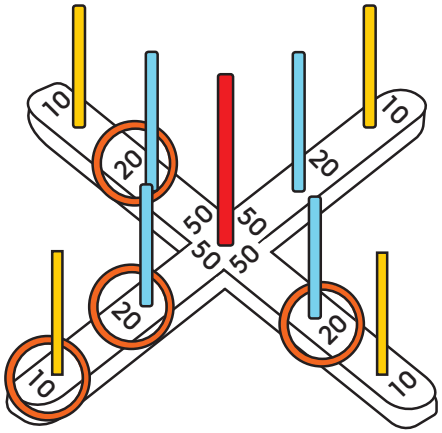
Hoopla and skittles

Sheet 2

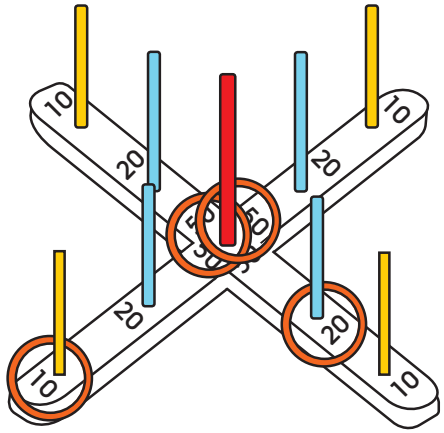
Hoopla



Total

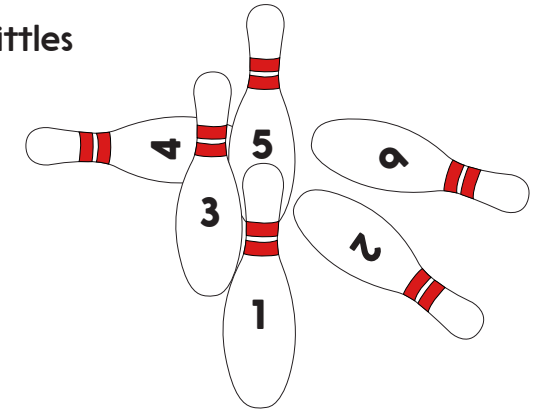


Total

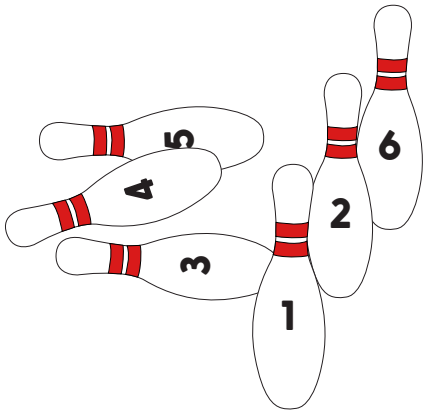


Total

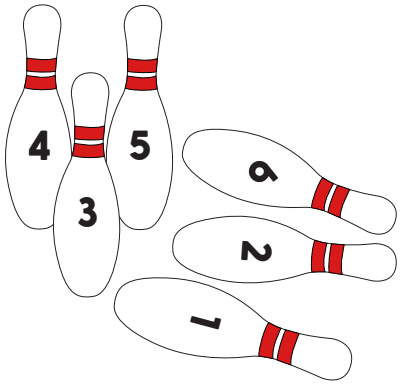
Skittles



Total



Total



Total

Grand total of all hoops and skittles

Make 10

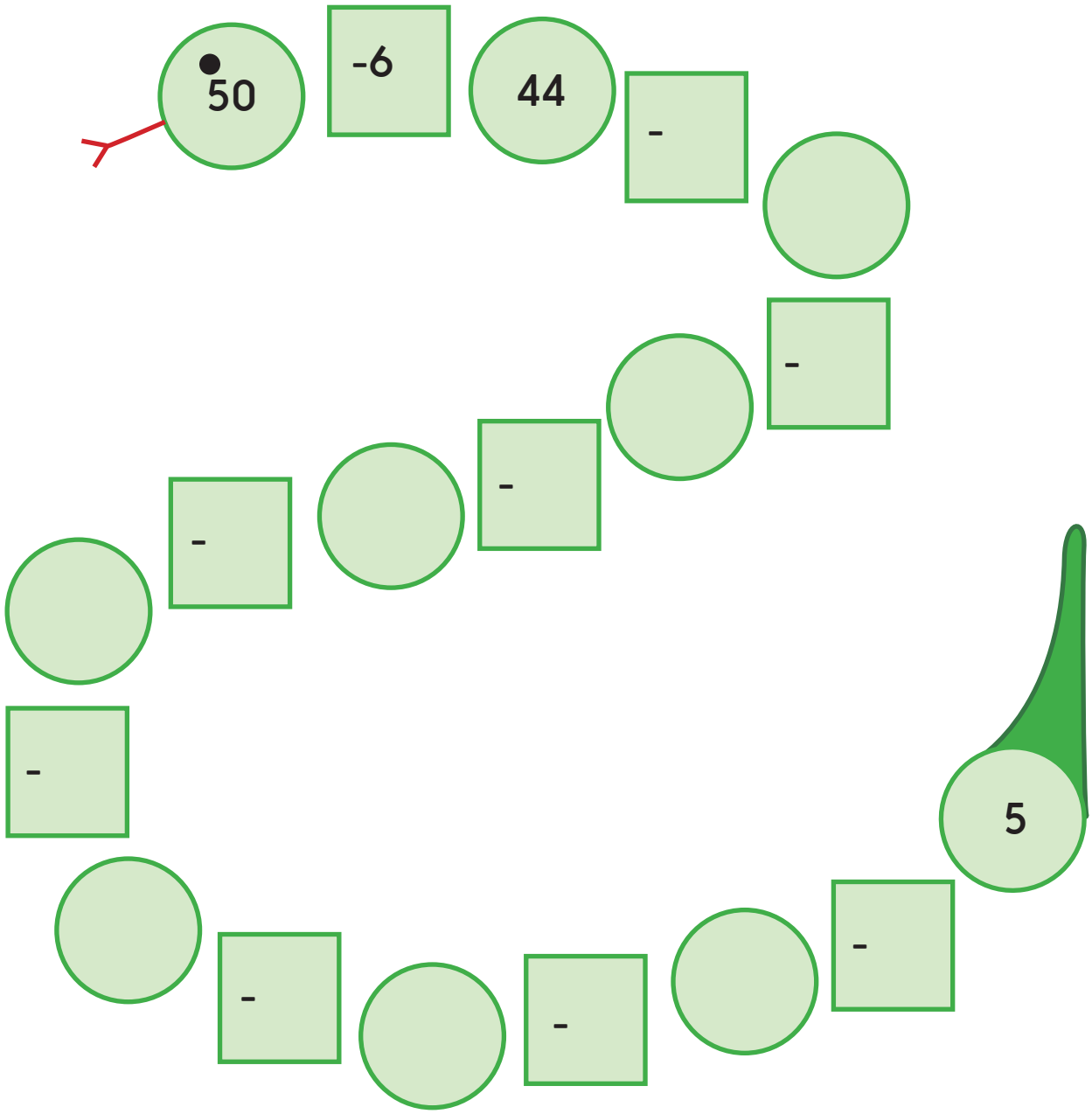
Sheet 1

Take it in turns to roll the dice and write the number in one of the squares.
You can write two, three or even more numbers in a square.
If you write a number in a square so that the numbers in that square add up to 10, you win that square. Ring it with your coloured pencil.
The first person to ring three squares in a line, in any direction, wins!

Down the snake

Sheet 2

Charlie started with 50.
He rolled a 1-10 dice.
He subtracted the number on the dice.
He kept on going until he reached 5.
Work out what numbers he might have subtracted to get to 5.
You might need a rubber to change your answers!



Challenge

Can you find a different set of dice throws that also leave him on 5?
Show them using a different coloured pencil.

Tens frustration

Sheet 1

Start on 5.
Move to a square next to 5. Add on the number in that square.
Now move to another square. Add on that number.
Carry on going until you reach the end.
Draw your route through the grid.
BUT if you ever make a 10s number, you must start again!
Use a different coloured pencil for each try.
How many routes through can you find?

START 5	6	4	5
3	9	3	1
4	8	3	7
6	4	5	4
2	3	7	END

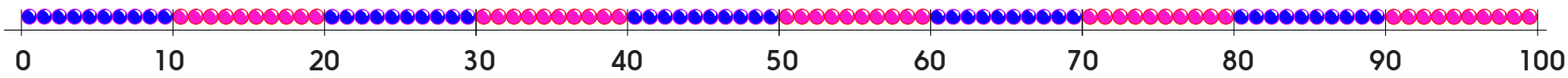
Number lines

Sheet 1

Write a number in each circle which belongs between the numbers on either side.

6		17		25		31		43		57		68		71						

Mark all your numbers on this line.



Challenge

1. 2 6 Use the pair of digit cards to make two numbers: _____ _____

Write a number between: _____

2. 3 4 Use the pair of digit cards to make two numbers: _____ _____

Write a number between: _____

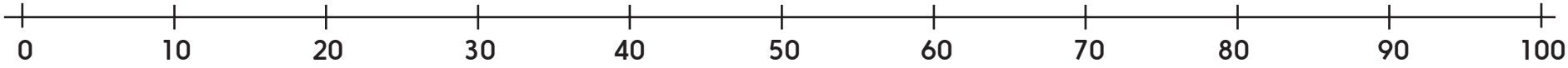
Number lines

Sheet 2

Write a number in each circle which belongs between the numbers on either side.

6	○	12	○	25	○	31	○	43	○	57	○	68	○	71	○	85	○	94

Mark all your numbers on this line.



Challenge

1. 6 2 4

Write ALL the 2-digit numbers that you can make using these cards.

_____

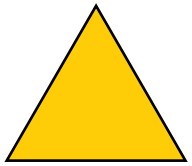
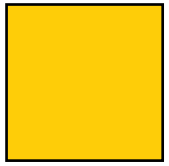
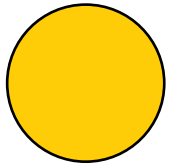
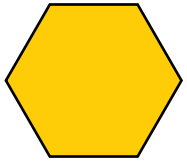
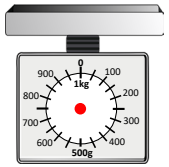
Write them in order, smallest first.

_____

Maths words

Sheet 1

Choose a card.
Write a description without using the words on the card.
Swap with a friend - can they guess what you are describing?

23 two three	**45** odd between	**38** less more	**99** nine before
 triangle corners	 square sides	 circle sides	 hexagon sides
 tape long	 jug water	 scales heavy	 clock hands

Challenge

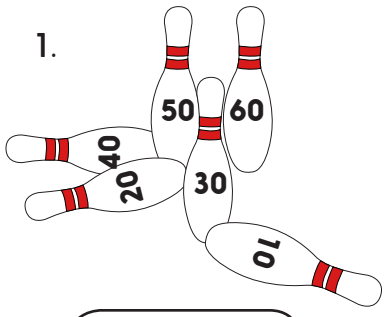
Make up two or more puzzles like this for other numbers, shapes or mathematical equipment. Think carefully about what words to ban. Can your partner find a way to describe the items?

Puzzles and problems

Answers

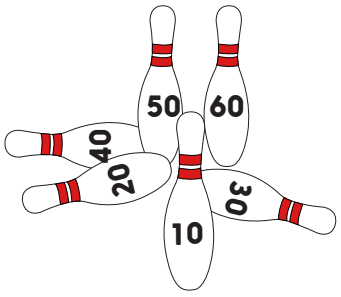
Day 1 Skittles Sheet 1

1.



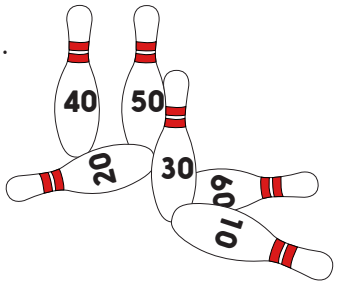
Total 40 + 20 + 10 = 70

2.



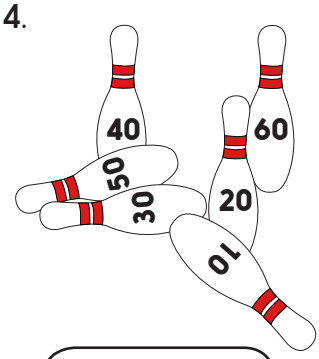
Total 40 + 20 + 30 = 90

3.



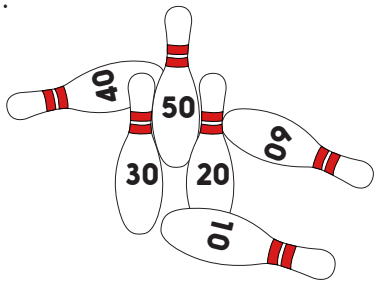
Total 20 + 60 + 10 = 90

4.



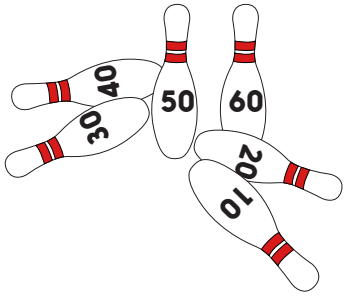
Total 50 + 30 + 10 = 90

5.



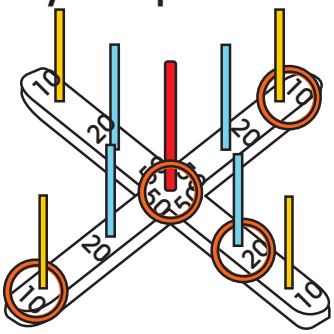
Total 60 + 40 + 10 = 110

6.

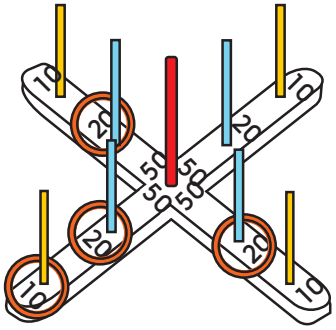


Total 40 + 30 + 20 + 10 = 100

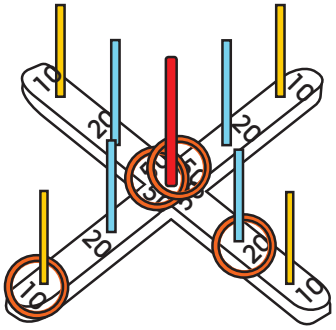
Day 1 Hoopla and skittles Sheet 2



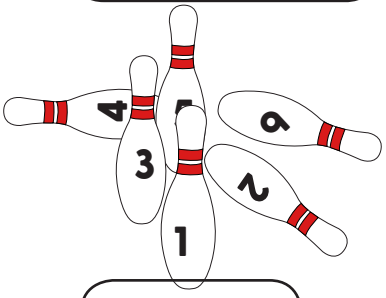
Total 50 + 20 + 10 + 10 = 90



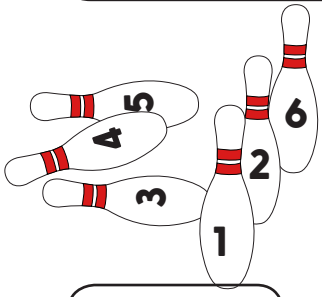
Total 20 + 20 + 20 + 10 = 70



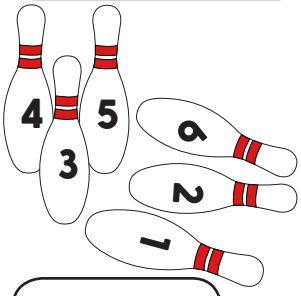
Total 50 + 50 + 20 + 10 = 130



Total 6 + 4 + 2 = 12



Total 5 + 4 + 3 = 12



Total 6 + 2 + 1 = 9

Grand total of all hoops and skittles: 90 + 70 + 130 = 290
12 + 12 + 9 = 33 290 + 33 = 323

Puzzles and problems

Answers

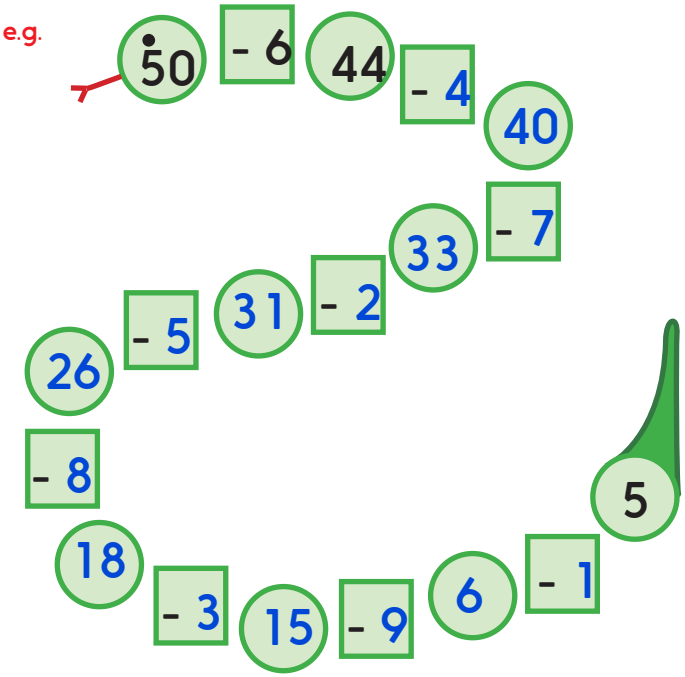
Day 2 Make 10 Sheet 1

Check children are ringing squares with a total of 10 inside.

Day 2 Down the snake Sheet 2

Check children's subtractions are correct as they move down the snake to get from 50 to 5.

e.g.



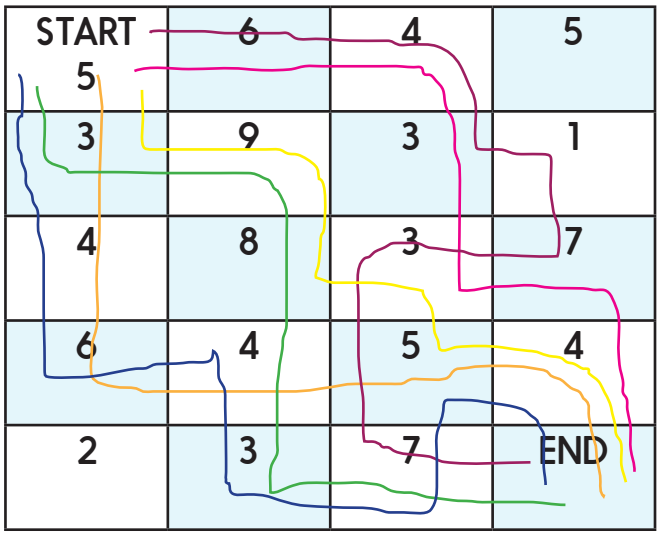
Challenge

Check children's subtractions and dice throws are different to those on their first snake.

Day 3 Tens frustration! Sheet 1

Follow children's routes through the number square to ensure that when they made a 10s number they went back to the start.

Some route examples



Puzzles and problems

Answers

Day 4 Number lines Sheet 1

Accept numbers from the ranges given in brackets.
6 (7 -16) 17 (18 - 24) 25 (26 - 30) 31 (32 - 42) 43 (44 - 56) 57 (58 - 67) 68 (69, 70) 71

Children should be marking their numbers on the beaded line between the beads and after the given number of beads.

Challenge

1. 26 62
Answers between 27 and 61

2. 34 43
Answers between 35 and 42

Day 4 Number lines Sheet 2

Accept numbers from the ranges given in brackets.
6 (7 -11) 12 (13 - 24) 25 (26 - 30) 31 (32 - 42) 43 (44 - 56) 57 (58 - 67) 68 (69, 70) 71 (72 - 84) 85 (86 - 93) 94

Children should be marking their numbers on the landmarked lines as accurately as they can.

Challenge

Numbers possible with digits 6, 2 and 4 in order from smallest to biggest:
24 26 42 46 62 64