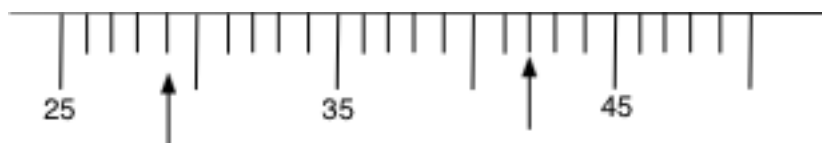


Number Questions

1. Find the number half-way between the two indicated by the arrows



2. What is the value of the 3 in the number 235,602?

3. Place the numbers below in order of increasing size

2.39, 2.3, 2.421, 2.381, 2.35, 3.39,

4. The maximum and minimum temperatures were recorded on each day of one week during in January 2015. The results are given in the table below.

	Sun	Mon	Tue	Wed	Thu	Fri	Sat
Maximum Temperature	1°C	3°C	0°C	4°C	7°C	0°C	3°C
Minimum Temperature	-5°C	-4°C	-6°C	-2°C	0°C	-5°C	-6°C

- a. Write down the lowest temperature of the week
 - b. The maximum temperature on Monday of the next week was 5°C higher than the coldest temperature of this week. Find this temperature
 - c. Find the difference between the maximum temperature on Thursday and the minimum temperature on Sunday
5. Three students, Jack, Emily and Roisin sat a maths test. The total, mark possible on the test was 40.
 Jack got 16 out of 40, Roisin got 40% of the total marks while Emily got $\frac{5}{8}$ of the total. Who got the highest mark?
6. In a class of 50 pupils, 11 are girls. What fraction are boys?

7. Below is the recipe for shortcakes

50g	sugar
200g	milk
200 g	flour
10 ml	milk

Jason makes some short cakes and uses 25 ml of milk in total, how many shortcakes does he make?

Had she used:

500g	sugar
1000g	milk
1000 g	flour
5000 ml	milk

What was the maximum number of shortcakes she could have made?

8. Cormac buys some clothes of total value €45.78. Because this number is greater than €40,00 he receives a discount of €6.00. How much does he pay in total?

9. Find two prime numbers that add to give a cube number

10. Look at the pattern below:

Line 1	$1 = 1$
Line 2	$1 + 2 = 3$
Line 3	$1 + 3 + 5 = 9$
Line 4	$1 + 3 + 5 + 7 = 16$
Line 5	$1 + 3 + 5 + 7 + 9 = 25$

- a. How many prime numbers would line 6 contain?
- b. What do you notice about the total in each line?
- c. What would the total in line 8 be?

11. A bus begins its journey to Dublin airport from Busaras, which includes three stops along the way. If:

- 31 passengers get on at Busaras
- 13 get on at the the first stop and 2 get off
- 16 get on at the second stop and 16 get off
- 7 get on at the last stop and 10 get off.

How many are on the bus when it arrives at the airport?

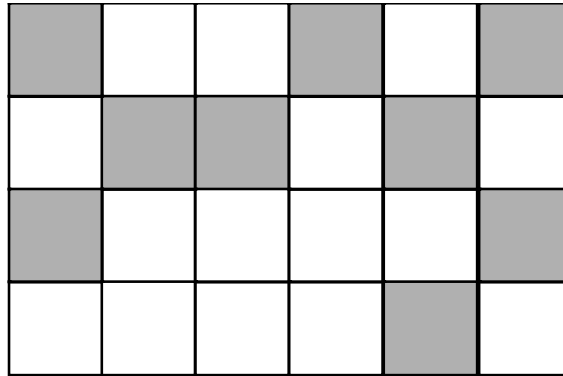
12. James has €15.35 to spend on comic books for his collection. If each one costs €1.25, how many can he buy? How much change does he receive if he buys as many books as he can?

13. Which of the following is biggest?

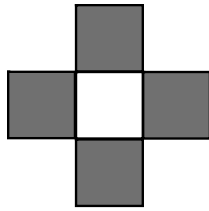
$$\frac{2}{5}, 20\%, \frac{1}{3}, 35\%, 0.3$$

14. Find the difference between $\frac{3}{4}$ of 60 and $\frac{2}{3}$ of 51.

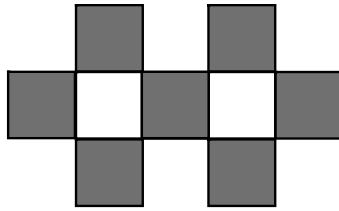
15. What percentage of the diagram below is shaded?



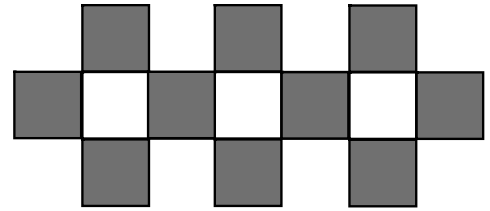
16. The patterns below are created using grey and white tiles.



Pattern 1

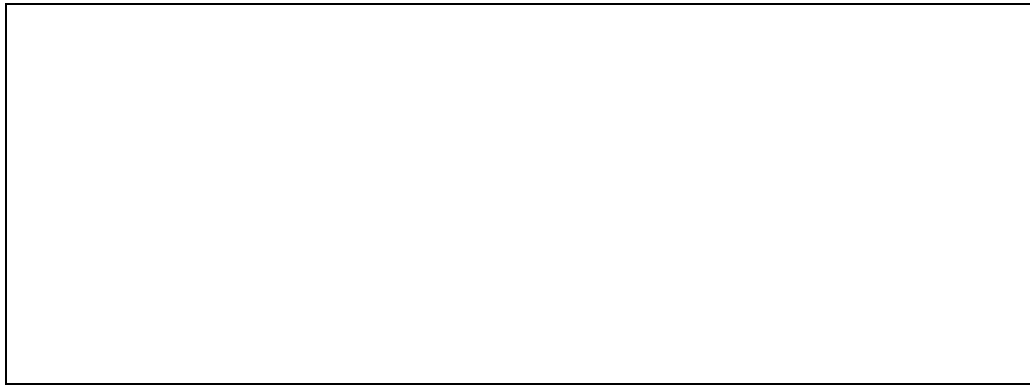


Pattern 2



Pattern 3

Draw the next pattern in the sequence below



How many grey tiles are required for Pattern 10?

17. Anabel has 120 DVDs

30% are thrillers

$\frac{2}{5}$ are romantic comedies

The remainder are foreign language films. How many of these does Anabel have?

18. Evaluate $(3 + 5) \times (9 - 2)$

19. Evaluate $4 + 3 \times 7$

20. Potatoes at the farm shop cost €10.00 for a 12 kg bag. The same potatoes cost €2.10 for a 2.5 kg bag at the local supermarket. Which one represents better value?

21. John has installed a water meter that has the following associated costs:

- | | |
|---------------------------------|--------|
| a. Charge for the meter | €35:50 |
| b. Cost per litre of water used | €58.50 |

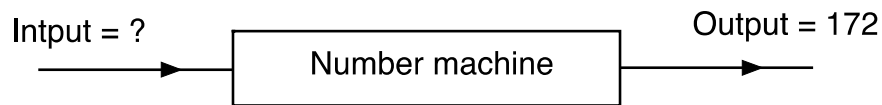
If John uses 180 litres of water per day, find his annual water bill

22. 8 kg of a certain type of food contains 50 g of fat. What percentage of the food is fat?

23. The table below shows an interesting number pattern. Complete lines 4 and 10 of the pattern.

Line Number			
1	$1^2 + 3^2$	$2 \times 2^2 + 2$	10
2	$2^2 + 4^2$	$2 \times 3^2 + 2$	20
3	$3^2 + 5^2$	$2 \times 4^2 + 2$	34
4			
10			

24. The number machine below doubles the input and subtracts two. Find the input.



25. What is the smallest number that is exactly divisible by 3 and 13?

26. What proportion of 3 hours is 10 minutes?

27. The table below gives the distance in kilometres between some towns

Kilkenny				
42	Carlow			
47	24	Athy		
92	61	42	Naas	
78	47	28	17	Kilcullen

Mark lives in Kilkenny. He has to drive to a meeting in Naas and then to Athy to collect some materials. He then returns directly to Kilkenny. Find:

- a. The total distance travelled by John
- b. He leaves Kilkenny at 9:00 am and drives at 80 km per hour. If the meeting in Naas lasts for 2 hours at what time does he return to Kilkenny?

















28. Two clothes shops sell the same type of sports jacket and purchase it from the same supplier for €140.00. The first shop increases the price by 15% while the second increases it by 17%. Find the difference in the new price of the sports jacket in two shops

29. The conversion table below is used to convert feet (ft) to metres (m). Complete the table

Feet (ft)	Meters (m)
2	0.612
3	0.918
4	
5	1.53

30. Majella withdraws €1600 from her bank account she is given the money in €10.00 and €20.00 notes. If she is given twice as many €10.00 as €20.00 notes. How many of each does she get?

31. The numbers shown are the totals of the four numbers in that row or column. Find all the remaining totals

				23
				28
				
				

24			
-----------	--	--	--

32. Chloe plants 20 rows and 12 columns of broccoli, how many broccoli plants did she plant in total?

33. Put each of these numbers in the correct cell in the table below

27 2 8 11 64

	Square Number	Odd Number	Even Number
Cube Number			
Prime Number			

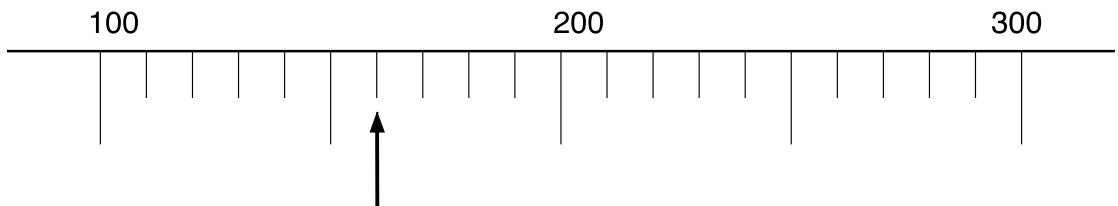
Why is it never possible to put a number in the shaded box?

34. A drink is made from 3.0 litres of orange juice and 6 litres of water. What fraction of the drink is orange juice?
 How much orange juice should be now added to increase the percentage of orange juice in the mixture to 40%?

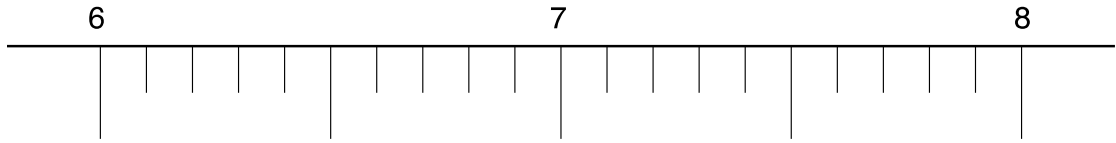
35. Divide 458.9 by 100

36. From 23.46 take 15.98

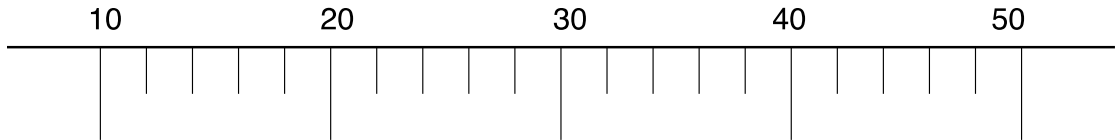
37. Write down the number indicated by the arrow on the number line



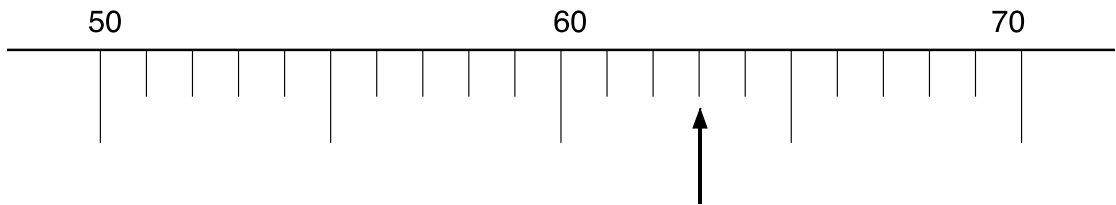
38. On the number line below, show, using and arrow, the number 7.4



39. On the number line below, show, using and arrow, the number 44



40. Write down the number indicated by the arrow on the number line



41. Which of the groups of numbers below are all multiples of 9?

- (a) 1,3,27 (b) 9,36,70 (c) 45,63,81 (d) 18,32,72 (e) $1, \frac{1}{9}, \frac{1}{27}$

42. John’s birthday is on Tuesday February 16. His mother’s birthday falls 50 days later. It is a leap year on what day of the week does her birthday fall?

43. The table below shows the items bought by Maurice in his local shop.
How much change does he receive if he pays the bill with a €10.00 note?

Item	Cost
Litre of Milk	€1.70
Pizza	€2.30
Sparkling Water	€2.45
Bag of Apples	€1.80

44. Which of the following is the correct fractional representation of 7.59?

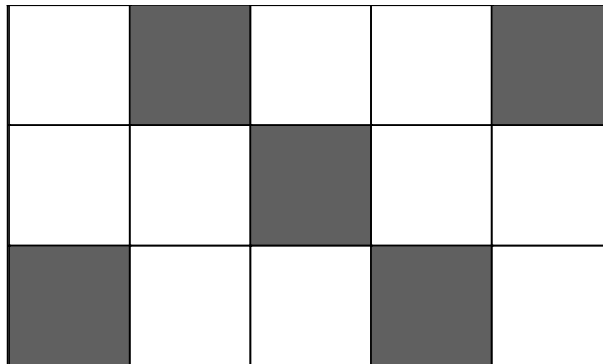
- (a) $7\frac{5}{10}$ (b) $7\frac{9}{10}$ (c) $\frac{759}{100}$ (d) $7\frac{59}{100}$

45. The temperature on the first six days of January were noted at a weather station and are shown in the table below

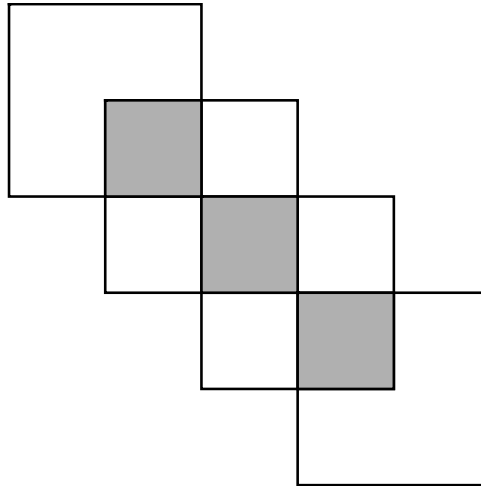
Day	Mon	Tue	Wed	Thu	Fri	Sat
Temperature/ $^{\circ}C$	-5	-3	0	1	3	-6

- a. On which day was the temperature lowest?
- b. What was the average temperature for the week?
- c. How much colder was it on Monday compared to Thursday?
- d. If the temperature on Monday doubled, what would it be?
- e. By the Saturday of the following week the temperature had increased by $10^{\circ}C$. What was the temperature then?

46. What fraction of the shape below is not shaded?



47. What fraction of the shape below is shaded?



48. Calculate the value of $11 + 4 \times 6$

49. Evaluate $\frac{2}{5} \div \frac{4}{5}$

50. Calculate $3\frac{4}{9} - 2\frac{1}{3}$

51. Calculate $\left(\frac{5}{6}\right)^2$

52. Insert the appropriate operators (+, -, \times or \div) to make the following statement true:

$$5 \quad \square \quad 4 \quad \square \quad 3 = 3$$

53. Find two-thirds of $\frac{1}{2}$

54. Find the number that is 15 greater than -32

55. Which of the following is equal to 72? Note there may be more than one correct answer.

- (a) $3 \times 4 + 6$ (b) $4 + 3 \times 6$ (c) $4 \times 3 \times 6$ (d) $140 \div 2 + 2$

56. Place the following fractions in increasing order: $\frac{1}{10}, \frac{2}{5}, \frac{6}{20}, \frac{1}{4}, \frac{5}{10}$