Independent Recap

Geometry and Statistics
Week 12

Year 6

THIRD SPACE LEARNING

Arithmetic

1. 3,941 ÷ 7

2. 58% of 780

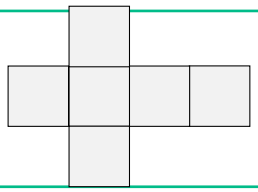
3. $2 - \frac{3}{7}$

4. 13 – 2.47

Practice: Nets of 3D Shapes

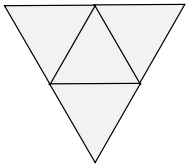
5. Recap: What is a 'net' of a shape?

6. What 3D shape can be made from this net?

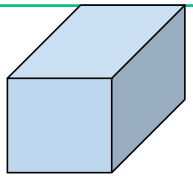


7. Complete this net in a different way to question 6.

8. What 3D shape can be made from this net?



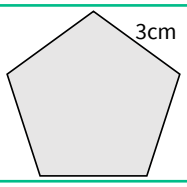
9. Draw the net for this 3D shape.



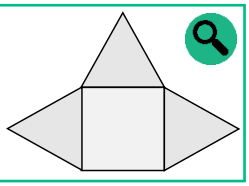
10. Name a 3D shape with at least one curved surface. What does a curved surface mean?

11. Draw the net of a 3D shape with a curved surface.

12. Copy and complete the net for a pentagonal prism.



13. Izzie says her net makes a complete square based pyramid. Is she correct? Explain.



Challenge

14. Draw four incorrect nets for a cube.

Explain why each incorrect net would not make a complete cube.

You might want to talk to an adult

Spot the mistake

Answers

Q no.	Question	Answer
1	3,941 ÷ 7	563
2	58% of 780	452.4
3	$2 - \frac{3}{7}$	1 and $\frac{4}{7}$ or $\frac{11}{7}$
4	13 – 2.47	10.53
5	What is a 'net' of a shape?	A net of a 3D shape is what a 3D shape would look like if it was opened out and placed flat. A net can be folded to create a 3D shape.
6	What 3D shape can be made from this net?	Cube
7	Complete this net in a different way to question 6.	Accurately completed net of a cube that is different to question 6.
8	What 3D shape can be made from this net?	Tetrahedron
9	Draw the net for this 3D shape.	The final net should have 4 rectangles and two squares.
10	Name a 3D shape with at least one curved surface. What does a curved surface mean?	Sphere, hemisphere, cylinder, cone. A curved surface is rounded (not flat).
11	Draw the net of a 3D shape with a curved surface.	Accurately drawn net of one of the shapes noted in answer 10.
12	Copy and complete the net for a pentagonal prism.	The final net should have 5 rectangles (or squares) and two pentagons.
13	Izzie says her net makes a complete square based pyramid. Is she correct? Explain.	Izzie is incorrect. Her net should have four triangles and one square but it only has three triangles and one square. Her net would be incomplete.
14	Draw four incorrect nets for a cube. Explain why each incorrect net would not make a complete cube.	Answers will vary. Accept answers that demonstrate an understanding of why the net would not make a complete cube net.

Arithmetic

1. 58,600 ÷ 8

2. 32% x 670

3. 2.6 x 4.6

4. 36,259 + 85,247

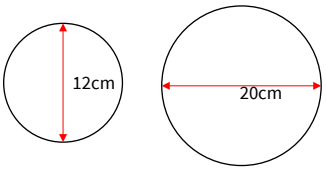
Practice: Parts of a Circle

5. Recap: Define the words:
Circumference
Radius
Diameter

6. Complete the sentence.

The diameter is ? the radius of a circle.

7. Find the radius of the circles.



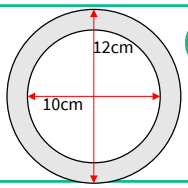
8. What is the diameter of the circle if the radius is:

a. 3cm b. 5cm c. 8cm

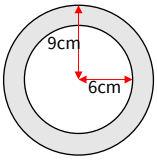
9. What is the radius of the circle if the diameter is:

a. 14cm b. 9cm c. 25cm

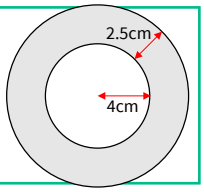
10. Both circles have the same centre. Explain how you would find the radius of both circles.



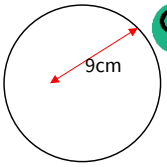
11. Both circles have the same centre. What is the diameter of each circle?



12. Both circles have the same centre. What is the radius and diameter for each circle?



13. Callum says he has found the radius of the circle. Is he correct? Explain.



Challenge

14. Always, sometimes, never.

Lines starting from the circumference showing the radius and diameter do not need to touch or pass through the centre of the circle.

Prove your answer.

You might want to talk to an adult

Spot the mistake

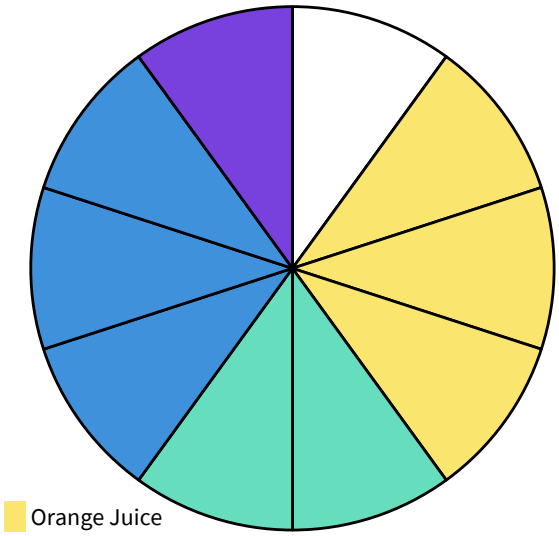
Answers

Q no.	Question	Answer
1	58,600 ÷ 8	7,325
2	32% x 670	214.4
3	2.6 x 4.6	11.96
4	36,259 + 85,247	121,506
5	Define the words: Circumference , Radius, Diameter	The circumference is the edge of a circle. The radius is the distance from the centre of a circle to any point on its circumference. The diameter is a straight line that touches two points on the circumference of a circle and passes through the centre.
6	Complete the sentence.	The diameter is double the radius of a circle.
7	Find the radius of the circles.	a. 6cm, b. 10cm
8	What is the diameter of the circle if the radius is:	a. 6cm, b. 10cm, c. 16cm
9	What is the radius of the circle if the diameter is:	a. 7cm, b. 4.5cm, d. 12.5cm
10	Both circles have the same centre. Explain how you would find the radius of both circles.	As both circles share the same centre, the information given can be used to calculate the radius and diameter as usual.
11	Both circles have the same centre. What is the diameter of each circle?	Smaller circle - 12cm, larger circle - 18cm
12	Both circles have the same centre. What is the radius and diameter for each circle?	Smaller circle - radius is 4cm, diameter is 8cm. Larger circle - radius is 6.5cm, diameter is 13cm
13	Callum says he has found the radius of the circle. Is he correct? Explain.	Callum is incorrect as he has not drawn a line from the circumference to the centre of the circle. The radius must always be a line from the circumference of a circle to the centre point.
14	Always, sometimes, never. Lines starting from the circumference showing the radius and diameter do not need to touch or pass through the centre of the circle. Prove your answer.	Never. Lines showing the radius and diameter always need to touch or pass through the centre of a circle. Lines touching two points of the circumference but not the centre of the circle are chords.

Pie Charts

Pie Chart a.

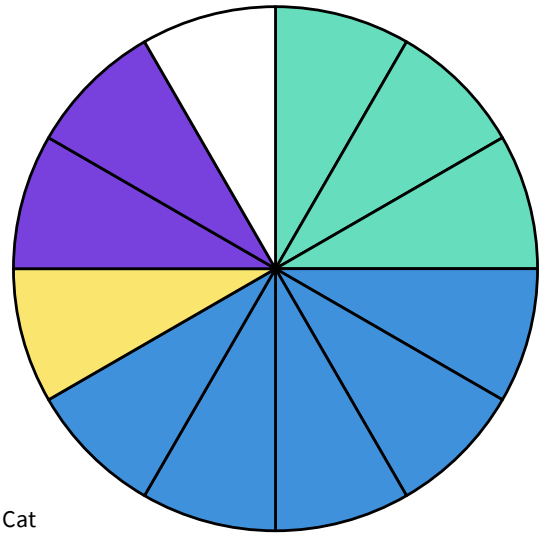
The pie chart shows the favourite drink of 100 children.



- Orange Juice
- Lemonade
- Water
- Blackcurrant
- Other

Pie Chart b.

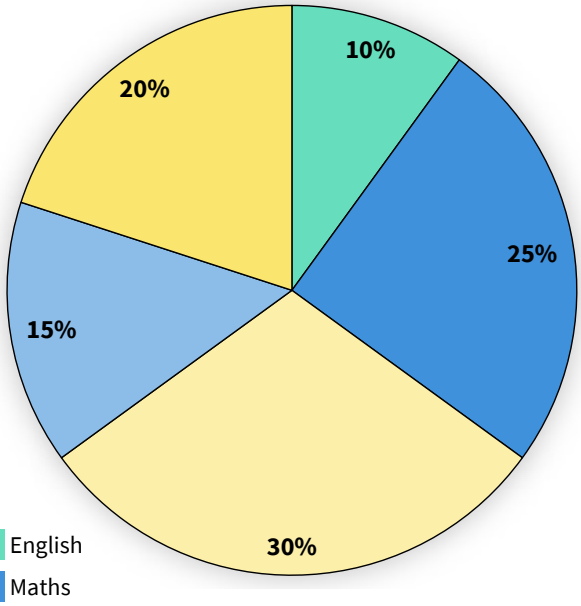
The pie chart shows the favourite animal of 360 children.



- Cat
- Dog
- Horse
- Rabbit
- Bird

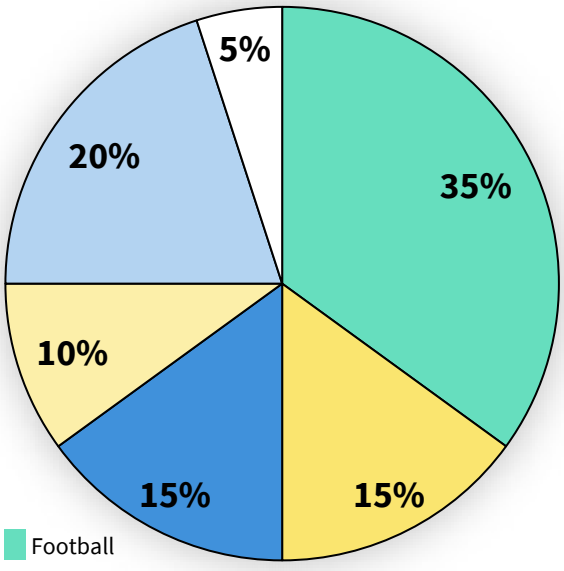
Pie Chart c.

The pie chart shows the favourite subject of 60 children.



- English
- Maths
- PE
- Art
- History
- Other

Pie Chart d.



- Football
- Reading
- Drawing
- Swimming
- Cycling
- Other

Arithmetic

1. 3,717 ÷ 63

2. 89% of 6,000

3. 728,963 – 45,217

4. 4.2 x 9.1

Practice: Pie Charts

5. Recap: Explain how to calculate the total of each section on pie chart a.

6. Look at pie chart a. How many children chose:

a. water b. lemonade c. other

7. Look at pie chart a. What faction of children chose:

a. blackcurrant b. orange juice and lemonade

c. blackcurrant and other

8. Look at pie char b. How many children chose:

a. dog b. cat c. rabbit

9. Look at pie char b. Which two types of animals:

a. had a combined total of 60 votes

b. had a difference of 90

10. When a pie chart shows percentages, how do you use this to calculate the total of each section?

11. Look at pie char c. How many children voted for:

a. PE b. Art c. History

12. Look at pie chart c. How many more people voted for:

a. PE than maths b. History than art

c. English than other

13. Ali says that on pie chart c, 35 people voted for maths and english combined. Is this correct? Explain.

Challenge

14. Pie chart d shows votes for favourite hobbies. 20 people voted for swimming. Use this information to find:

a. The total number of votes the pie chart represents

b. How many people voted for each hobby

You might want to talk to an adult

Spot the mistake

Answers

Q no.	Question	Answer
1	3,717 ÷ 63	59
2	89% of 6,000	5,340
3	728,963 – 45,217	683,746
4	4.2 x 9.1	38.22
5	Explain how to calculate the total of each section on pie chart a.	There are 10 sections in the pie chart a. The pie chart represents 100 children. To find the total of each section, divide the total (100) by the number of sections (10). Each section represents 10 children.
6	Look at pie chart a. How many children chose:	a. 30, b. 20, c. 10
7	Look at pie chart a. What faction of children chose:	a. $\frac{1}{10}$, b. $\frac{1}{2}$, c. $\frac{1}{5}$
8	Look at pie char b. How many children chose:	a. 150, b. 90, c. 60
9	Look at pie char b. Which two types of animals:	a. bird and horse, b. dog and rabbit
10	When a pie chart shows percentages, how do you use this to calculate the total of each section?	The pupil needs to know that they must first know the whole that the pie chart represents. They then find the given percentage of the total.
11	Look at pie char c. How many children voted for:	a. 18, b. 9, c. 12
12	Look at pie chart c. How many more people voted for:	a. 3, b. 3, c. 6
13	Is Ali correct? Explain.	This is incorrect. Ali has added the two percentages and assumed that is the total votes. He has not found 35% of the 60 children who voted. In total, 21 children voted for maths and english combined.
14	Pie chart d shows votes for favourite hobbies. 11 people voted for swimming. Use this information to find: a. The total number of votes the pie chart represents b. How many people voted for each hobby	The pie chart represents 200 votes. Football - 70 votes Reading - 30 votes Drawing - 30 votes Swimming - 20 votes Cycling - 40 votes Other - 10 votes

Arithmetic

1. 7,448 ÷ 98

2. 71% x 590

3. 63 x 79

4. 350 – 78 x 2

Practice: The Mean

5. Recap: Explain how to find the mean of a set of numbers.

6. The mean apples = ?

set 1 

set 2 

set 3 

7. Find the mean of:

a. 10, 5, 2, 3, 7, 8, 7

b. 5, 7, 3, 2, 8, 1, 9, 8, 9, 2, 1

8. Find the mean of:

a. 1, 3, 5, 2, 1, 5, 7, 2, 9, 4

b. 1, 8, 5, 2, 1

9. What is the total if:

a. The mean of 6 number is 7

b. The mean of 5 numbers is 45

10. Explain how to find the missing number:
Mean = 5
4, 5, 4, 7, ?, 1, 9, 6

11. What is the missing number?

Mean = 4.5

7, 2, 5, 0, 7, ?

12. What is the missing number?

Mean = 5.7

4, 6, 5, 8, 1, 9, 4, 8, 9, ?

13. 32, 45, 71, 22, 35
Sandra says the mean of her numbers is 51.25.
Is she correct? Explain.

Challenge

14. The mean of 5 numbers is 21.

What could the five numbers be? Give at least 5 different options.

You might want to talk to an adult

Spot the mistake

Answers

Q no.	Question	Answer
1	7,448 ÷ 98	76
2	71% x 590	418.9
3	63 x 79	4,977
4	350 – 78 x 2	194
5	Explain how to find the mean of a set of numbers.	Total ÷ number of items = mean
6	The mean apples = ?	4
7	Find the mean	a. 6, b. 5
8	Find the mean	a. 3.9, b. 3.4
9	What is the total	a. 42, b. 225
10	Explain how to find the missing number:	To calculate the answer, pupils must calculate the total of the numbers (mean x total items). From this they can calculate the missing number by adding all the other values and subtracting from the total (or any other method that works for the pupil). The missing number is 4.
11	What is the missing number?	6
12	What is the missing number?	3
13	32, 45, 71, 22, 35 Sandra says the mean of her numbers is 51.25. Is she correct? Explain.	Sandra is incorrect. She has added the numbers but has divided by the incorrect number of items. The correct answer is 41.
14	The mean of 5 numbers is 21. What could the five numbers be? Give at least 5 different options.	The total of the numbers would be 105. Accept any answers where the total is 105. Example answers: 5, 20, 17, 50, 13 30, 12, 40, 11, 12