

Task 1

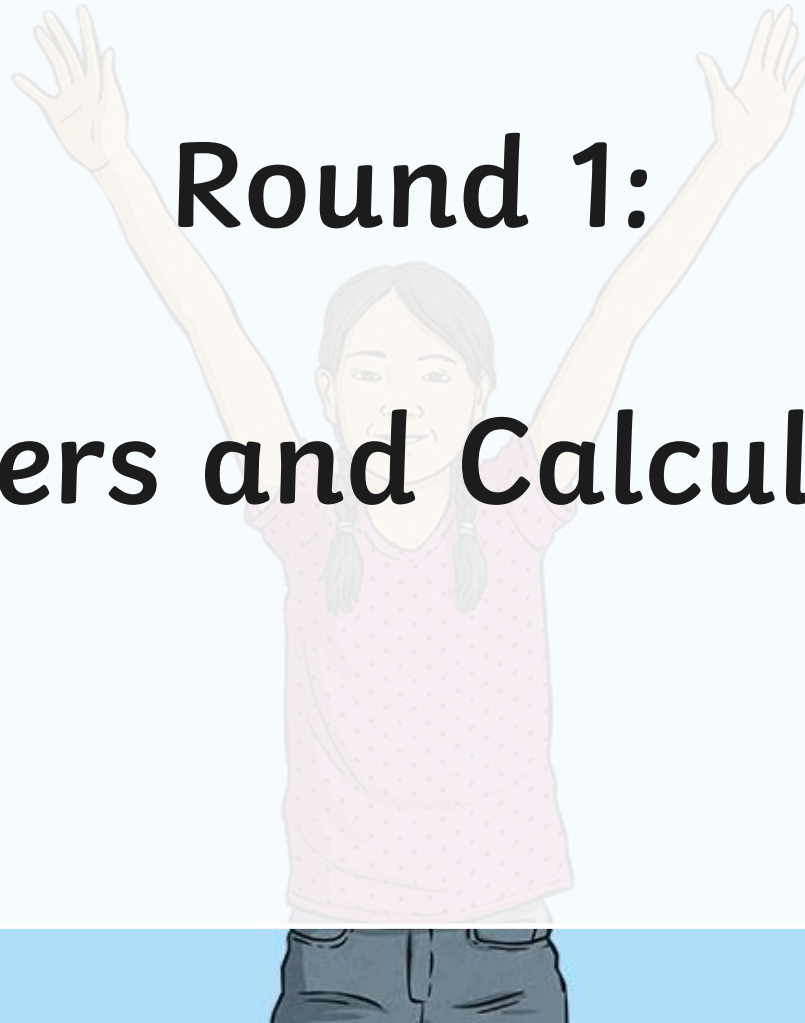
1

Round 1:

2

Numbers and Calculations

3



1. What is the value of the underlined number?

53076

1 A. three thousand

B. three hundred

C. three

D. thirty thousand

2. Put these numbers in order (smallest first).

1 A. 382950

B. 329805

C. 953082

D. 903582

3. What is 3789 to the nearest 100?

A. 4000

B. 3790

C. 3800

D. 3700

4. In Antarctica in summer, the temperature is 8°C in the day.
At night, it drops by 14°C .
What is the temperature at night?

1

A. -22°C

B. -6°C

C. -8°C

D. 6°C

5. The next morning, the temperature in Antarctica increases from -6°C to 6°C .
How much has it increased?

1 A. 12°C

B. 10°C

C. -12°C

D. The temperature is the same

6. 430 sweets from a jar of 1100 were sold in one day.

How many sweets are left in the jar?

1 A. 770

B. 1530

C. 670

D. 570

7. The chocolates in a chocolate box are arranged into 13 rows, with 13 chocolates in each row.

What is 13^2 ?

1 A. 260

B. 144

C. 169

D. 26

8. 808kg of recycled plastic is sent to the factory. This will be made into 100 plastic containers. How much plastic would be used to make 1 container?

1 A. 0.808kg

B. 88kg

C. 8.8kg

D. 8.08kg

9. Put these in order (smallest to largest).

1
A. 0.4

B. 80%

C. $\frac{1}{4}$

D. $\frac{7}{10}$

10. Which of these fractions is not equivalent to $\frac{6}{9}$?

1

A. $\frac{8}{12}$

B. $\frac{2}{3}$

C. $\frac{18}{21}$

D. $\frac{30}{45}$

Round 1 Answers

1. A: three thousand

6. C: 670

2. B, A, D, C

7. C: 169

3. C: 3800

8. D: 8.08kg

4. B: -6°C

9. C, A, D, B

5. A: 12°C

10. C: $\frac{18}{21}$

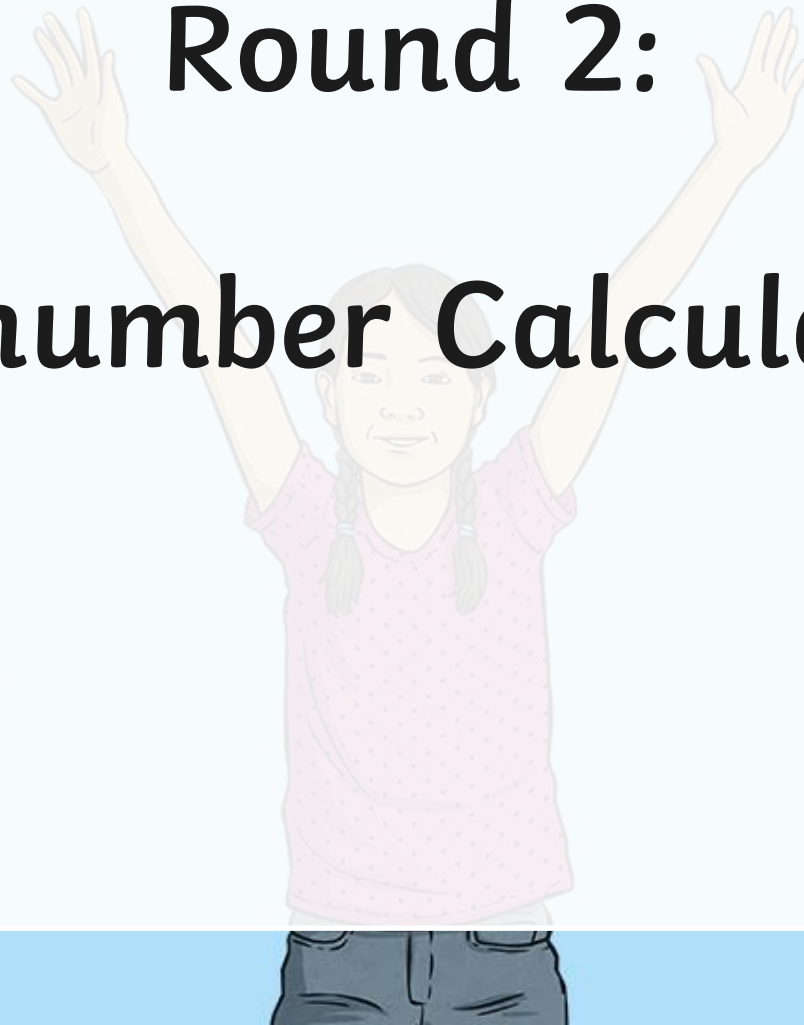
Round 2:

Non-number Calculations

1

2

3



1. What kind of an angle is 190° ?

1
A. right angle

B. acute angle

C. obtuse angle

D. reflex angle

2. A rectangle has a length of 5 cm and a width of 4 cm.

What is the area of the rectangle?

1
A. 20cm^2

B. 20cm

C. 9cm^2

D. 1cm

3. A triangle has 3 angles.

23°, 47° and...

1 A. 110°

B. 100°

C. 90°

D. 80°

4. Starting at position $(4,-2)$, which coordinate do you finish at if you move left 5 times and up 6 times?

1 A. $(1,-4)$

B. $(-1,-4)$

C. $(1,4)$

D. $(-1,4)$

5. 20% of staff at a company where 160 people work are sick and cannot work.

How many people are still able to work?

1 A. 110

B. 128

C. 140

D. 144

6. Recipe for 4 chocolate cupcakes:
110g chocolate, 200g flour, 60g butter, 4 eggs.
What is the correct recipe for 10 chocolate cupcakes?

1
A. 25g chocolate, 50g flour, 15g butter and 1 egg

B. 250g chocolate, 800g flour, 240g butter and 12 eggs

C. 400g chocolate, 800g flour, 180g butter and 12 eggs

D. 275g chocolate, 500g flour, 150g butter and 10 eggs

7. Derek buys a new shirt for £12.25 and a tie for £5.80.
What change does he get from £20.00?

1 A. £18.50

B. £2.00

C. £1.95

D. £2.95

8. What is the volume of a cuboid if the sides measure 10cm, 15cm and 5cm?

1 A. 30cm^3

B. 600cm^3

C. 750cm^3

D. 25cm^3

9. Tamwar has to travel 6 miles to meet his friend.
Roughly how much is this in kilometres?

1 A. 6km

B. 12km

C. 5km

D. 10km

10. What is the mean of these numbers...

6, 6, 8, 9, 6

1 A. 5

B. 7

C. 6

D. 8

Round 2 Answers

1. D: reflex angle

2. A: 20cm^2

3. A: 110°

4. D: $(-1,4)$

5. B: 128

6. D: 275g chocolate, 500g of flour, 150g butter, 10 eggs

7. C: £1.95

8. C: 750cm^3

9. D: 10km

10. B: 7

Task 2: Emoji Maths

Emoji Code Breaking

5	2	7	3	4	9	6	8	0	1

$$\text{Smiling Face with Smiling Eyes} + \text{Thinking Face} + \text{Dog Face} + \text{Smiling Face with Hearts} + \text{Crying Face} + \text{Woman with Pink Hair} + \text{Mouse Face} + \text{Blue Face with Sweat} = 9725$$

- $$\text{Grinning Face with Big Eyes} + \text{Smiling Face with Smiling Eyes} + \text{Thinking Face} + \text{Mouse Face} + \text{Frowning Face} + \text{Dog Face} + \text{Crying Face} + \text{Smiling Face with Hearts} =$$
- $$\text{Blue Face with Sweat} + \text{Woman with Pink Hair} + \text{Smiling Face with Hearts} + \text{Smiling Face with Smiling Eyes} - \text{Mouse Face} + \text{Thinking Face} + \text{Dog Face} + \text{Thinking Face} =$$
- $$\text{Dog Face} + \text{Mouse Face} + \text{Smiling Face with Hearts} + \text{Frowning Face} - \text{Blue Face with Sweat} + \text{Crying Face} + \text{Smiling Face with Smiling Eyes} + \text{Thinking Face} =$$
- $$\text{Smiling Face with Smiling Eyes} + \text{Smiling Face with Hearts} + \text{Woman with Pink Hair} + \text{Dog Face} + \text{Grinning Face with Big Eyes} + \text{Frowning Face} + \text{Grinning Face with Big Eyes} + \text{Woman with Pink Hair} =$$
- $$\text{Dog Face} + \text{Mouse Face} + \text{Woman with Pink Hair} + \text{Grinning Face with Big Eyes} + \text{Dog Face} + \text{Blue Face with Sweat} + \text{Mouse Face} + \text{Thinking Face} =$$
- $$\text{Blue Face with Sweat} + \text{Crying Face} + \text{Thinking Face} + \text{Smiling Face with Hearts} - \text{Woman with Pink Hair} + \text{Blue Face with Sweat} + \text{Smiling Face with Smiling Eyes} + \text{Frowning Face} =$$
- $$\text{Smiling Face with Hearts} + \text{Dog Face} + \text{Smiling Face with Smiling Eyes} + \text{Woman with Pink Hair} + \text{Grinning Face with Big Eyes} + \text{Dog Face} + \text{Thinking Face} + \text{Grinning Face with Big Eyes} =$$
- $$\text{Crying Face} + \text{Thinking Face} + \text{Frowning Face} + \text{Mouse Face} - \text{Mouse Face} + \text{Blue Face with Sweat} + \text{Grinning Face with Big Eyes} + \text{Smiling Face with Hearts} =$$
- $$\text{Woman with Pink Hair} + \text{Smiling Face with Hearts} + \text{Grinning Face with Big Eyes} + \text{Dog Face} + \text{Mouse Face} + \text{Thinking Face} + \text{Woman with Pink Hair} + \text{Thinking Face} =$$
- $$\text{Frowning Face} + \text{Crying Face} + \text{Dog Face} + \text{Thinking Face} - \text{Smiling Face with Hearts} + \text{Blue Face with Sweat} + \text{Frowning Face} =$$

1



3

Task 2 Answers

1



3

5	2	7	3	4	9	6	8	0	1

1. + = **7177**
2. - = **5552**
3. - = **621**
4. + = **7625**
5. + = **19 195**
6. - = **1883**
7. + = **10 831**
8. - = **3159**
9. + = **9519**
10. - = **1309**

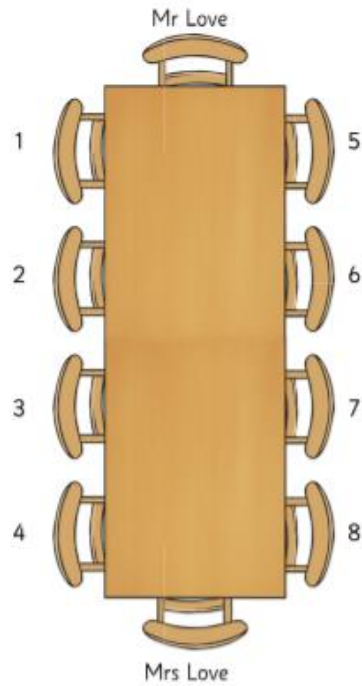
Task 3

1

At their wedding, Mr and Mrs Love sat eight guests on the top table of their wedding, seating them four to each side. Mr Love was sat at the head and Mrs Love was sat at the opposite end. Given the seating plan that follows, can you determine where each guest sat, their full name and their interesting job or accomplishment?

1. The four guests on one side of Mr Love were seated man-woman-man-woman and on the other, woman-man-woman-man, so that a man and woman sat directly across from each other at all places at the table.
2. Deirdre enjoyed hearing about the activities of the two men who flanked her at the table, Ellison and the man who welded large metal sculptures.
3. Betty sat directly across the table from the inventor.
4. Tom was seated between Ms McKay and the woman who won £1,000,000 on the television show "I Survived."
5. Yuri talked politics with the Member of Parliament (MP) who sat next to him.
6. Longhouse sat next to the rock star, who was seated directly opposite the professional basketball player.
7. Jessica and the man who is CEO of an Internet company had adjoining place settings.
8. Mr Nordi didn't sit across from either Ms McKay or the £1,000,000 survival show winner.
9. Pierre wasn't seated next to Mr Love.
10. The inventor's place wasn't set next to either the bride or the groom.
11. Kerrie listened attentively to the man sitting directly opposite her, Mr Cooper; Cooper isn't the man who is the Internet CEO.
12. Roger and Ms Gordon sat next to each other at the table.
13. Tom and Mr Nordi both commented on the chocolate mousse dessert.
14. Kerrie and the woman who won £1,000,000 on the TV show played dominos against each other after dinner.
15. Mr Baye and Ms Filbert were seated directly opposite each other at the table.
16. The astronaut isn't the person who was seated to Mrs Love's immediate right.

Mr and Mrs Love



Seat Number	Name	Interesting Job or Accomplishment
1		
2		
3		
4		
5		
6		
7		
8		

Task 3 Answers

Mr and Mrs Love **Answers**

Seat Number	Name	Interesting Job or Accomplishment
1	Yuri Cooper	Rock Star
2	Betty Longhouse	MP (Member of Parliament)
3	Roger Baye	Internet CEO
4	Jessica Gordon	Astronaut
5	Kerrie McKay	Pro basketball player
6	Tom Ellison	Inventor
7	Deirdre Filbert	"I Survived" contestant
8	Pierre Nordi	Metal sculptor