

Practice Sheet Hot

Add and subtract near multiples of 10, 100, 1000

1. $5378 + 51$ $5378 + 48$
2. $6425 - 602$ $6425 - 597$
3. $4635 + 2002$ $4635 + 1995$
4. $24,378 + 405$ $24,378 + 398$
5. $34,651 + 3002$ $34,651 + 2997$
6. $67,384 - 53$ $67,384 - 49$
7. $32,456 - 4002$ $32,456 - 3995$
8. $45,823 + 503$ $45,823 + 496$
9. $32,538 + 410$ $32,538 + 390$
10. $73,256 - 5020$ $73,256 - 4990$

Investigation

Add and subtract near multiples

Things you will need:

- Add and subtract near multiples: Set 1 and Set 2



Start with 5468

- Add near multiples to this number, then subtract near multiples from it.
- Cut up and spread out Set 1 of the 'Add and subtract near multiples' cards.
- Choose an **addition** card and decide what multiple of 10, 100 or 1000 it would be useful to add to 5468.

e.g.
Choose '+ 305 and + 299' add 300.
 $5468 + 300 = 5768$

- Now calculate $5468 + 305$ (add 5 more to 5768) and $5468 + 299$ (subtract 1 from 5768). You can draw a number line to help: no adding in columns!
- Repeat with three different addition cards, each time starting with 5468.
- Can you predict what the difference will be between your two answers?
- Repeat for subtractions.

e.g.
Choose '- 1005 and - 995'.
Subtract 1000: $5468 - 1000 = 4468$
How will you find $5468 - 1005$ and $5468 - 995$?

- Repeat for 3 more subtraction cards, each time starting with 5468.

Challenge

Start with 23,456 and use Set 2 of the 'Add and subtract near multiples' cards.

Try and work these out mentally. Also remember to use the inverse method to help you solve the problem.

$$£2.68 + \square = £3$$

$$56,278 - 6070$$

$$12.5 - 0.7$$

$$6 - \square = 5.36$$

$$45.7 + 0.6$$

$$4.58 + \square = 5$$

$$\square - £2.67 = £2.33$$

$$6.45 + 0.55$$

$$43,020 + 408$$

$$£4.36 - 37p$$

$$\square + 0.48 = 1$$

$$\square + 31p = £5$$

$$\square - 0.47 = 0.53$$

$$3.25 - 0.26$$

$$£4.78 + 23p$$

$$£4.65 + £1.35$$

$$£10 - \square = £5.01$$

Investigation

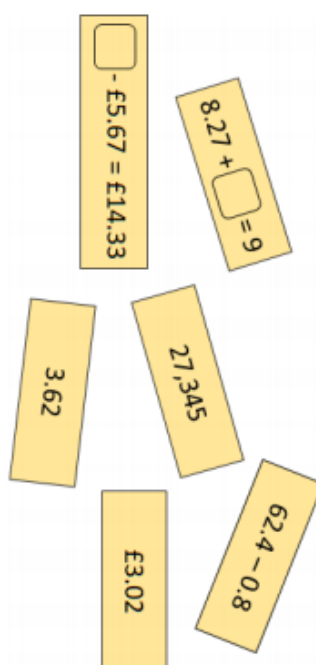
Quick calculations

Things you will need:

- Mental addition and subtraction cards



- To prepare for this challenge cut up and shuffle both sets of 'Mental addition and subtraction cards' (questions and answers) then spread them all out, face up, on a table.



- There are 21 questions!
- Predict how many questions and answers you can match in 5 minutes!
- Using a clock/watch/timer to check, match as many questions and answers as you can in 5 minutes.
- How close was your prediction?
- Repeat. Can you match them all this time, or beat your previous time if you matched them all first time?
- Are there any that you find tricky? Put those aside and see if you can find all of the others in 5 minutes. Think about what strategies help with these questions before trying again with the tricky ones.

Challenge

Write six more of your own questions which use pairs to 100, including £1 (e.g. 27p + 73p) and 1 (e.g. 0.41 + 0.59). Include examples with empty boxes in the first and second positions, e.g.


$$\square + 27p = £1$$

$$1 = 0.41 + \square$$


Card for your investigation. Match the answers to the questions. Maybe play with a partner.

Investigation

Mental addition and subtraction cards




| | | |
|----------------------------|-------------------------|-----------------------------|
| $8.27 + \square = 9$ | $45,703 - 5003$ | $£6.48 + \square = £10$ |
| $62.4 - 0.8$ | $\square + 0.47 = 1$ | $£5 - \square = £3.79$ |
| $45,703 - 5700$ | $\square - 0.46 = 2.54$ | $7.34 + \square = 10$ |
| $£2.75 + 27p$ | $£8.35 - 37p$ | $£10 - \square = £5.31$ |
| $20,305 + 7040$ | $23.6 + 0.7$ | $3.7 + \square = 4.3$ |
| $\square - £5.67 = £14.33$ | $\square + 0.38 = 4$ | $2.78 + 0.23$ |
| $8.54 - 0.55$ | $43,241 + 20,005$ | $34,030 + \square = 34,738$ |




Investigation

Mental addition and subtraction cards



| | | |
|--------|--------|-------|
| 2.66 | 3.62 | 24.3 |
| 0.6 | 0.73 | 0.53 |
| £7.98 | 27,345 | 7.99 |
| 40,700 | £20 | £3.52 |
| 63,246 | 40,003 | 708 |
| 61.6 | 3 | £1.21 |
| £3.02 | £4.69 | 3.01 |



Explanation sheet

Understand and use equivalence.

Find the missing numbers that will make these equations balance.

$48 \div 6 = 2 \times \square$

$3.6 \times \square = 10 - 2.8$

Remember each side of the equals sign must be **equal**.

Answers
2
4

Check these basic.

$5 \times 40 = 4 \times 50$

$82 - 005 = 8 + 40$

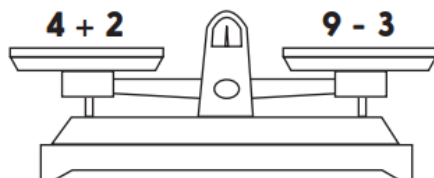
$5 \times 40 \text{ bns } 4 \times 50$
.821 laupa rhas

$82 - 005 \text{ bns } 8 + 40$
.541 laupa rhas

ngie elsupa ert to shie rhas
enoitrupe ert - laupa ad taum
.comlad taum

Wae-992 6 skil 2"i
taum aw, shie ano of trngiew bbs sw it
shie vertho ert of trnuoms amez ert bbs
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A Bit Stuck? Balance



What is the missing number that will make each of these balance?

1. $7 + 3 = 6 + \square$

5. $16 - 7 = \square + 5$

2. $3 + 17 = \square + 11$

6. $5 \times 4 = 2 \times \square$

3. $\square + 40 = 50 + 30$

7. $12 \div 2 = \square - 15$

4. $91 + \square = 30 + 70$

8. $\square + 15 = 6 \times 5$

Answers: 1. 4 2. 9 3. 40 4. 9
5. 4 6. 10 7. 21 8. 15

Remember that both sides need to balance = the same amount

1. $4 \times 5 = 18 + \square$

5. $\square \times 6 = 80 - 8$

2. $20 - 6 = \square \times 7$

6. $2 \times 12.5 = 100 \div \square$

3. $34 + 27 = 100 - \square$

7. $3.4 + \square = 12.6 - 7.6$

4. $45 \div 5 = 18 \div \square$

8. $\square \div 8 = 84 \div 12$

Challenge

Investigate the pairs of numbers you could put into these equations to make the left and right hand sides equivalent.

Find at least 3 different solutions for each.

$$30 \times \square = \square + 20 \quad \square - 5 = \square \div 2$$

2* 3*

Check your understanding Questions

How many times must I add 7 to 7,728 get to 7,777?

Subtract 205 from each of...

- 12,321
 - 45,254
 - 20,062
-

What will the ones digit of your answer be if you carry out the following sequence?

1. Start with 30,460.
 2. Add 9999
 3. Subtract 999
 4. Add 99
 5. Subtract 9
 6. What's your final number?
-

What numbers must be subtracted from 21,234 to leave:

- 9999
 - 19,235
 - 21,035
-

Complete each sentence:

$$£4.36 + \square = £5 \quad £6.72 + \square = £10$$

$$4.83 + \square = 10$$

Write the value of each shape.

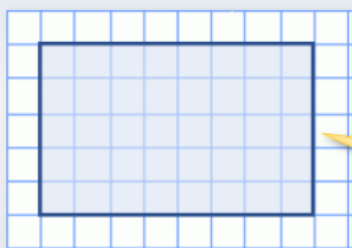
$$701 - \star = 3 \times 152 \quad (6.25 \times 6) + \blacklozenge = 120 \div 3$$

$$100 - 55.68 = \frac{1}{2} \text{ of } \triangle$$

Here is an equation with two empty spaces.

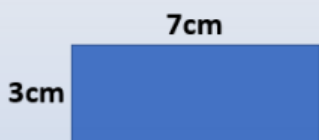
What ONE number will make the equation balance?

$$(34 \times 5) - \square = 4 \times \square \times 4$$

Find areas of squares and rectangles in cm^2 .

What is the area of this rectangle?
Do we need to count the squares
in every row?
Why not?

?



How many *square centimetres*
would be inside this
rectangle?

?

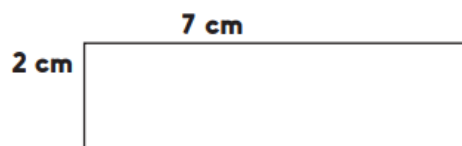
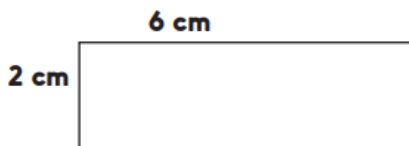
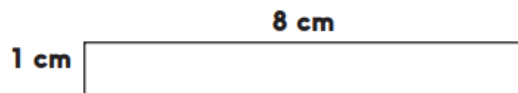
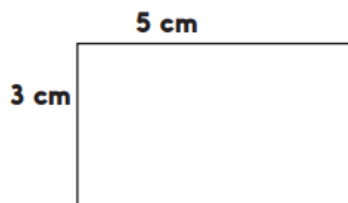
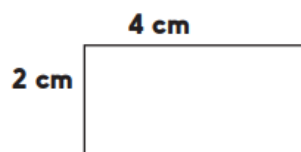
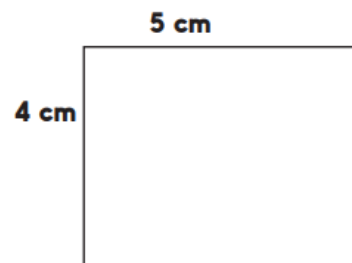
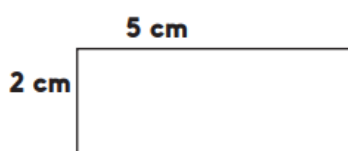
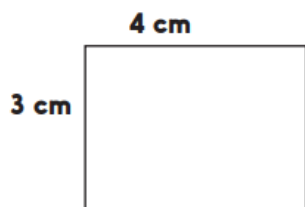
To find the area, we can
multiply the length by the width.
We abbreviate square
centimetres to cm^2 .

How do you know? How can you
calculate the area of the rectangle
without counting squares?

?

Finding areas of rectangles

Work out the areas of all these rectangles. Write the answer inside each rectangle.

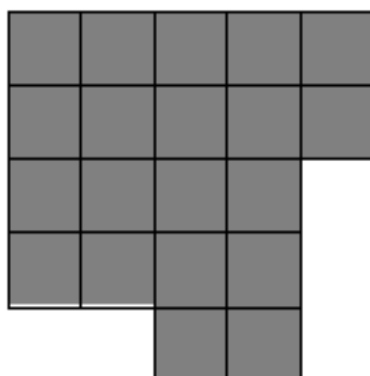


Challenge

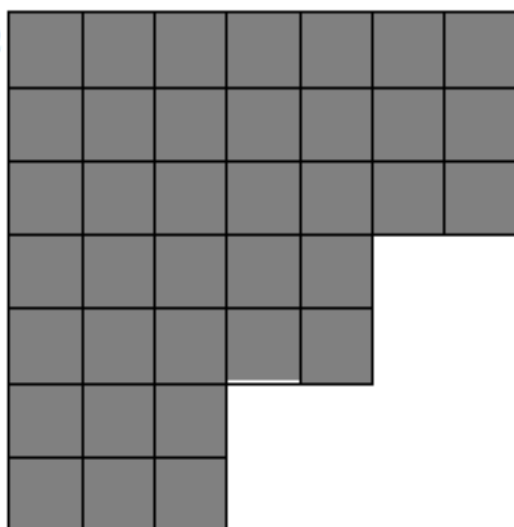
Draw at least three different rectangles with an area of 24cm^2 . Which has the greatest perimeter?

Calculate the area of these 2D shapes

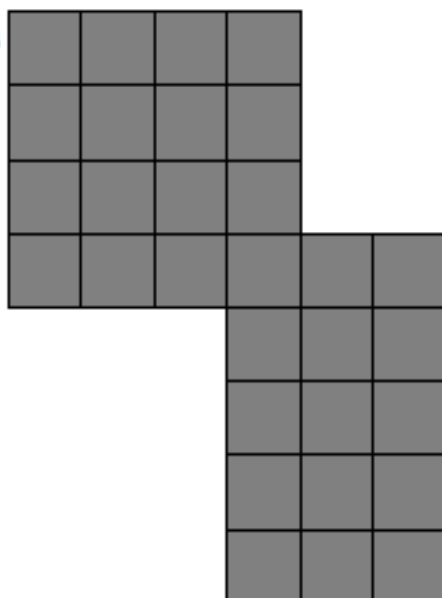
1



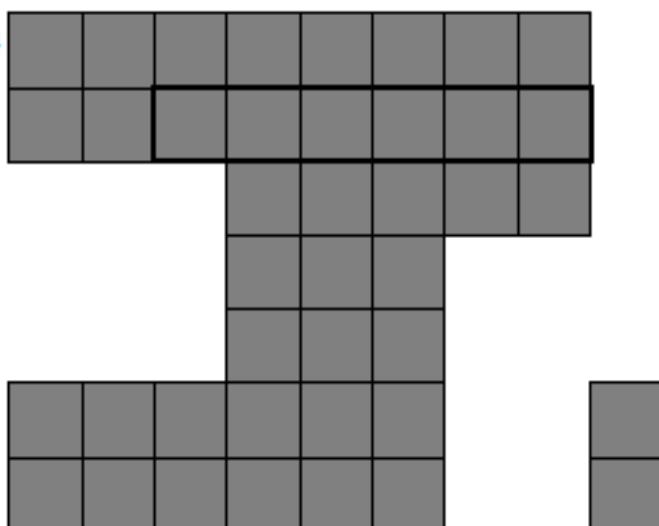
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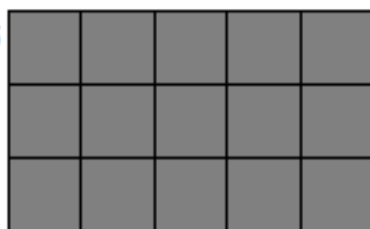
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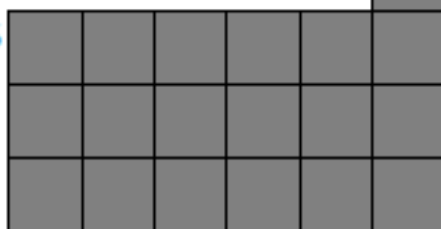
4



5



6



If you are finished:
Which shape has the biggest perimeter?
Which shape has the smallest perimeter?

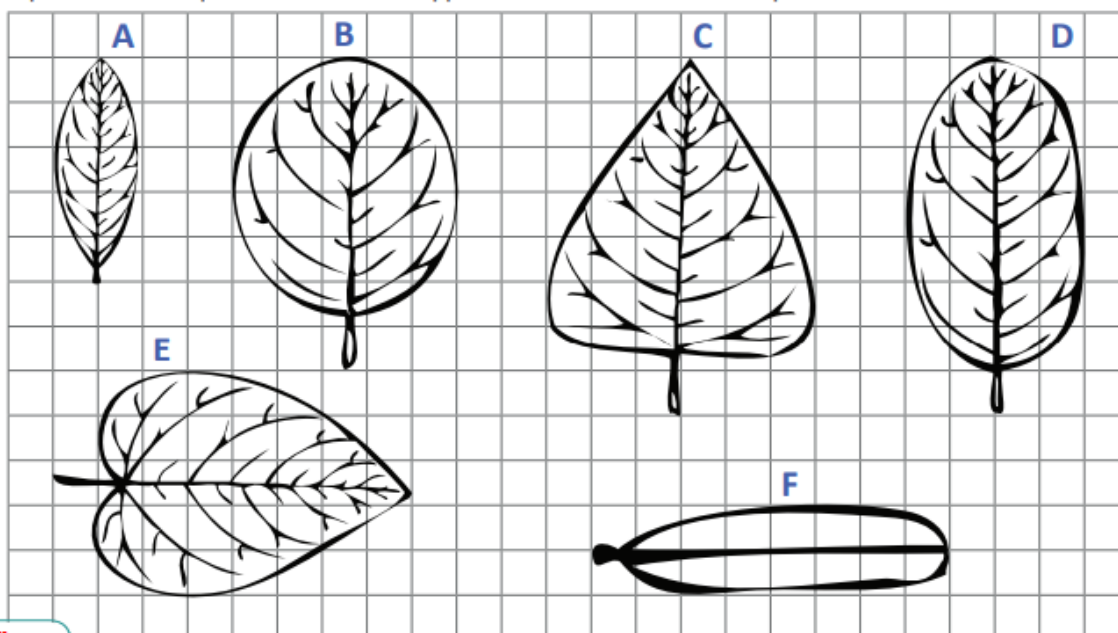


Practice Sheet for All Estimating area

Which leaf shape do you think has the greatest area?

Write the letters of the leaves in order from which you think has the least area to the greatest areas.

Now count squares and half squares to find out the approximate area of each leaf shape.



Hot challenge

Find four more irregularly shaped objects, e.g. a banana skin, a plant leaf, the base of a tea cup, your footprint, etc. Estimate the area of each. Draw around each and find its area. How accurate were your estimates?

3*

Remember

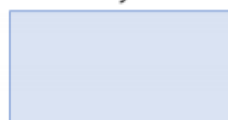
The perimeter is the distance around all sides of a 2-D shape.

To find the perimeter of a rectangle, add the length and width, then double.

A Bit Stuck? Area and perimeter

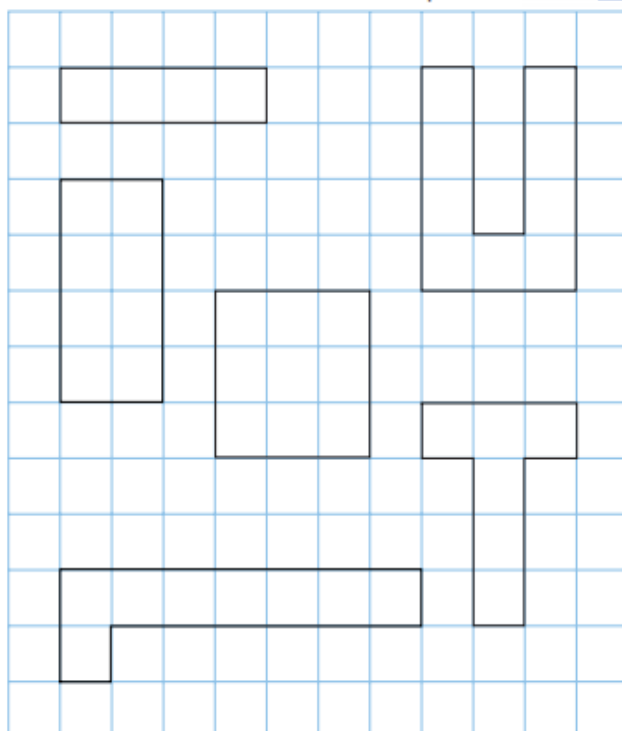
3cm
width

7cm length



Perimeter is $(7\text{cm} + 3\text{cm})$ doubled
so, perimeter = 20cm
Area is $3\text{cm} \times 7 = 21\text{cm}^2$

Label each shape with a letter A to F to describe its area and perimeter.



- A Area: 9cm^2
Perimeter: 20cm
- B Area: 8cm^2
Perimeter: 18cm
- C Area: 4cm^2
Perimeter: 10cm
- D Area: 9cm^2
Perimeter: 12cm
- E Area: 6cm^2
Perimeter: 14cm
- F Area: 8cm^2
Perimeter: 12cm

2*

Try your best and see how many problems you can solve.

Check your understanding

Questions

Sam has two photos. One has an area of 49cm^2 . The other has an area of 56cm^2 .
A side length of one photo is equal to one of the sides of the other.
What are the side lengths of the two photos?

The area of a rectangle is 45 cm^2 . If one side is 4cm longer than the other, what is the perimeter of the rectangle?



Mary has an oval table. She wants to find its area as accurately as she can.
Write 2 or 3 sentences explaining how she might do this.

Fold here to hide answers

Check your understanding

Answers

Sam has two photos. One has an area of 49cm^2 . The other has an area of 56cm^2 .
A side length of one photo is equal to one of the sides of the other.
What are the side lengths of the two photos?
7cm by 7cm and 7cm by 8cm

The area of a rectangle is 45cm^2 . If one side is 4cm longer than the other, what is the perimeter of the rectangle? *28cm.*

*The sides must be 9cm and 5cm which give an area of 45 cm^2 .
The perimeter is 28cm ($9\text{cm} + 5\text{cm} + 9\text{cm} + 5\text{cm}$).*

Mary has an oval table. She wants to find its area as accurately as she can.
Write 2 or 3 sentences explaining how she might do this.



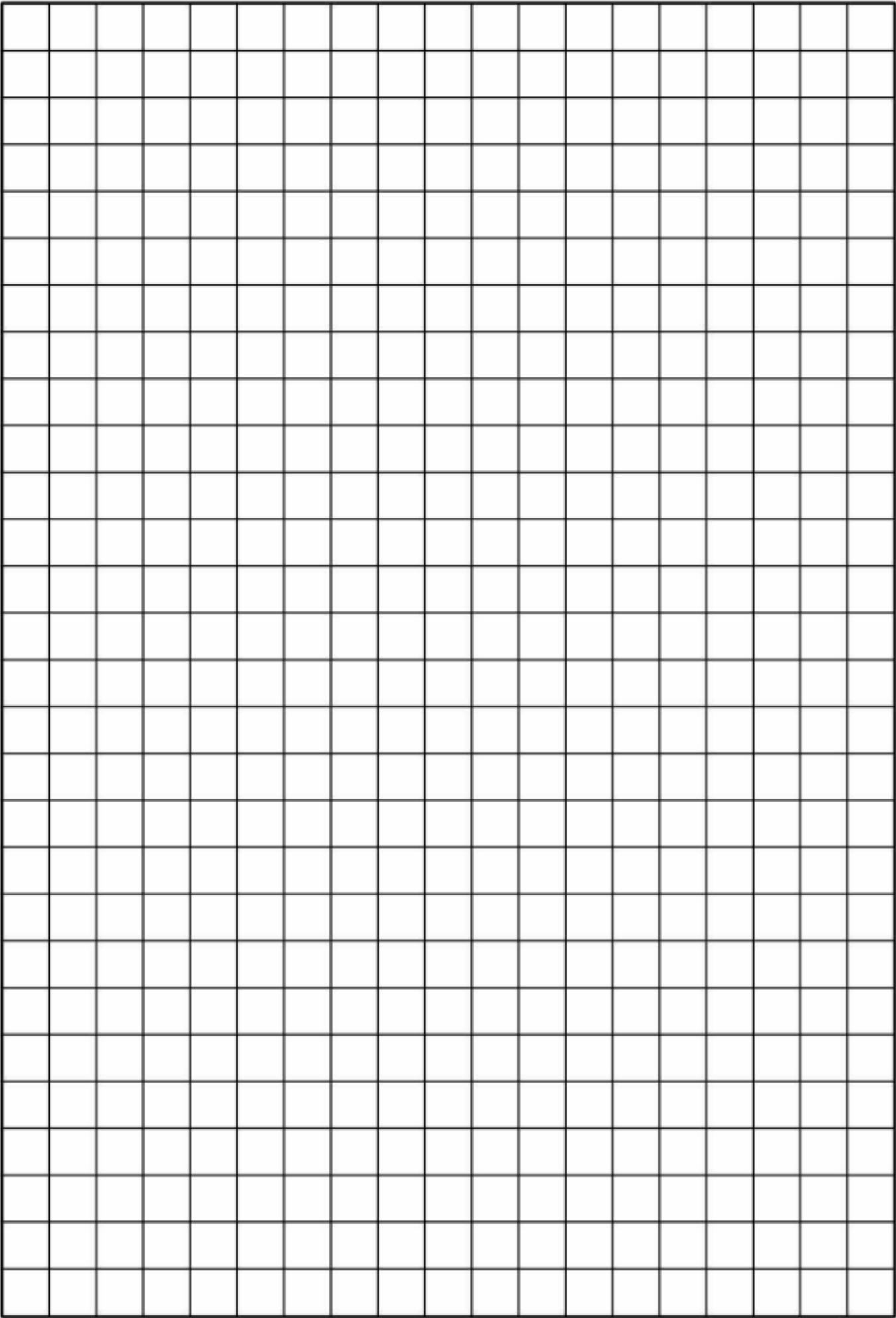
One way would be to use centimetre squared paper – cut out pieces that are 10 by 10cm, i.e. 100cm^2 (or larger pieces, but keep them all the same); see how many fit across the main part of the surface. Then cut out pieces to cover the curved parts and count as accurately as possible.

2* 3*

Summer week 2 Friday 20th June maths

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Try your best and see how many problems you can solve - use this sheet to do you working out.



Check your understanding

Answers

How many times must I add 7 to 7,728 get to 7,777? 7 times.

Subtract 205 from each of...

- 12,321 12,116
- 45,254 45,049
- 20,062 19,857

If done mentally, check children are jotting down part-answers, e.g. 12,321, 12,121

(subtracting 200), 12,116 (subtracting 5 more). Encourage children to add 205 back to their answers to check.

What will the ones digit of your answer be if you carry out the following sequence? 0, same as the starting number since nine 1s are twice added and twice subtracted.

1. Start with 30,460.
2. Add 9999 40,459
3. Subtract 999 39,460
4. Add 99 39,559
5. Subtract 9 39,550
6. What's your final number? 39,550

Check children make the right adjustments, e.g. when adding 9999, add 10,000 then subtract 1; when subtracting 999, subtract 1000 then add 1.

What numbers must be subtracted from 21,234 to leave:

- 9999 11,235
- 19,235 1,999
- 21,035 199

Complete each sentence:

$$£4.36 + [64p \text{ or } £0.64] = £5 \quad £6.72 + [£3.28] = £10$$

$$4.83 + [5.17] = 10$$

Write the value of each shape.

$$701 - 245 = 3 \times 152 \quad (6.25 \times 6) + 2.5 = 120 \div 3$$

$$100 - 55.68 = \frac{1}{2} \text{ of } 88.64$$

Here is an equation with two empty spaces.

What ONE number will make the equation balance?

$$(34 \times 5) - 10 = 4 \times 10 \times 4$$

Estimating area

Leaf A is approximately 7 cm²

.

Leaf B is approximately 22 cm²

.

Leaf C is approximately 26 cm²

.

Leaf D is approximately 23 cm²

.

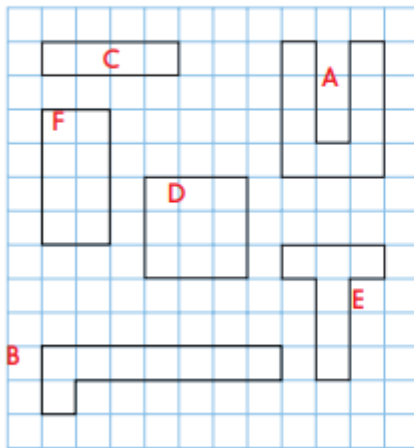
Leaf E is approximately 26 cm²

.

Leaf F is approximately 12 cm²

Answer

Area and perimeter



| | |
|---|---|
| A | Area: 9cm ² Perimeter: 20cm |
| B | Area: 8cm ² Perimeter: 18cm |
| C | Area: 4cm ² Perimeter: 10cm |
| D | Area: 9cm ² Perimeter: 12cm |
| E | Area: 6cm ² Perimeter: 14cm |
| F | Area: 8cm ² Perimeter: 12cm |