

## Maths Planning and Ideas



**Week Commencing: 30.03.20**

**Year Group: Year 6**

	Monday	Tuesday	Wednesday	Thursday	Friday
<b>Area of Learning</b>	<b>Arithmetic</b> LC: Can you use number bonds to make different totals?	LC: Can you calculate angles within a triangle?	LC: Can you calculate angles within a quadrilateral?	LC: Can you identify different types of angles?	LC: Can you find real life examples of different types of angles?
<b>Activity</b>	<p><b>Starter:</b> Complete the 10 mental maths questions for Monday (provided below)</p> <p><b>Main Activity</b></p> <p>Chn should recap number facts and bonds that they are already familiar with, e.g.</p> <ul style="list-style-type: none"> <li>• Bonds to 10 and 20</li> <li>• 10 bonds to 100</li> <li>• Numbers that add to 500 and 1000</li> <li>• Doubles and halves up to 100</li> </ul> <p>Practise some quick mental questions with a parent or a friend, e.g. what is <math>30+40</math> / what is double 18?</p>	<p><b>Starter:</b> Complete the 10 mental maths questions for Tuesday (provided below)</p> <p><b>Main Activity</b></p> <p>Chn should recap what they have learnt this half term about angles within a triangle – these add up to <math>180^\circ</math></p> <p>Chn to watch the video to recap different types of triangles and their properties <a href="https://www.bbc.co.uk/bitesize/topics/zvmxsbk/articles/zggsfrd">https://www.bbc.co.uk/bitesize/topics/zvmxsbk/articles/zggsfrd</a></p> <p><b>Independent Activity</b></p> <p>Complete the questions provided below, including some</p>	<p><b>Starter:</b> Complete the 10 mental maths questions for Wednesday (provided below)</p> <p><b>Main Activity</b></p> <p>Similarly to yesterday, chn should recap what they already know:</p> <ul style="list-style-type: none"> <li>• Angles on a straight line add up to <math>180^\circ</math></li> <li>• Angles around a point add up to <math>360^\circ</math></li> <li>• Opposing angles are equal to each other.</li> <li>• Angles within a triangle add up to <math>180^\circ</math></li> <li>• <b>Angles within a quadrilateral add up to <math>360^\circ</math></b></li> </ul>	<p><b>Starter:</b> Complete the 10 mental maths questions for Thursday (provided below)</p> <p><b>Main Activity</b></p> <p>Chn to watch the video on different types of angles (up to 1:52) <a href="https://www.youtube.com/watch?v=GI70VDrHXhE">https://www.youtube.com/watch?v=GI70VDrHXhE</a></p> <p>Chn to draw an example of each angle type in their book:</p> <ul style="list-style-type: none"> <li>• An acute angle</li> <li>• An obtuse angle</li> <li>• A reflex angle</li> <li>• A right angle</li> </ul>	<p><b>Starter:</b> Complete the 10 mental maths questions for Friday (provided below)</p> <p><b>Main Activity</b></p> <p>Chn to quickly recap the angles that they have already covered in previous session – use the prompts in their books to help with this.</p> <p>Chn to spend time cutting out and designing their own angle eaters using</p>

<p><b>Independent Activity</b></p> <p>Have a go at making chosen totals in a range of different ways, e.g. find 5 different ways to make 50 / find 5 different ways that make 100.</p> <p>Challenge yourself to use all four operations to do this, e.g. add, subtract, multiply and divide.</p> <p>Have a go at the missing value questions below.</p>	<p>of the trickier problem solving examples – these follow the usual format of Fluency/Reasoning/Problem Solving/Dive Deeper with which the chn are familiar.</p>	<p>Chn should spend time researching quadrilaterals and having a go at drawing their own versions, both regular and irregular.</p> <p><b>Independent Activity</b></p> <p>Complete the questions provided below, including some of the trickier problem solving examples – these follow the usual format of Fluency/Reasoning/Problem Solving/Dive Deeper with which the chn are familiar.</p>	<p>Next to each picture, write down prompts and reminders about the sizes of these angles to refer back to later.</p> <p><b>Independent Activity</b></p> <p>Complete the questions provided below, including some of the trickier problem solving examples – these follow the usual format of Fluency/Reasoning/Problem Solving/Dive Deeper with which the chn are familiar.</p>	<p>the templates provided below.</p> <p><b>Independent Activity</b></p> <p>Use the angle eaters to complete an angle hunt within your house – try to find as many examples of each angle type and list where you found them or take a photo.</p> <p>Remember, the angle eaters are there to help you identify <math>90^\circ</math> as a starting point – from this, you should be able to estimate if the angle you have found is bigger or smaller than <math>90^\circ</math>, <math>180^\circ</math> or <math>360^\circ</math>.</p>
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## Starter Activities

Monday	Tuesday	Wednesday	Thursday	Friday
1. $652 + 78,845$	11. $6198 + 22,405$	21. $223 + 32,154$	31. $45,454 + 110,548$	41. $15,450 + 781,000$
2. $1/4 \times 2/3$	12. $1/8 \times 5/6$	22. $1/3 \times 2/3$	32. $3/4 \times 1/3$	42. $4/5 \times 3/8$
3. $45,497 - 235$	13. $72,100 - 408$	23. $65,302 - 200$	33. $5612 - 217$	43. $58,652 - 698$
4. $1/5 \times 6$	14. $1/7 \times 3$	24. $1/8 \times 4$	34. $1/3 \times 7$	44. $1/10 \times 69$
5. $8 \times 9 + 12$	15. $4 \times 6 + 15$	25. $10 \times 7 + 41$	35. $12 \times 3 + 10$	45. $6 \times 7 + 125$
6. $160 - 12 \times 2$	16. $280 - 18 \times 5$	26. $350 - 17 \times 4$	36. $189 - 12 \times 6$	46. $200 - 13 \times 6$
7. Find $2/3$ of 207	17. Find $2/3$ of 468	27. Find $2/3$ of 1413	37. Find $2/3$ of 1500	47. Find $2/3$ of 3000
8. Calculate 15% of 630	18. Calculate 15% of 890	28. Calculate 15% of 284	38. Calculate 15% of 548	48. Calculate 15% of 404
9. Write $3/10$ as a decimal	19. Write $7/10$ as a decimal	29. Write $9/10$ as a decimal	39. Write $7/10$ as a decimal	49. Write $1/10$ as a decimal
10. $11,835 \div 15$	20. $6375 \div 15$	30. $7980 \div 15$	40. $9720 \div 15$	50. $3480 \div 15$

**If you cannot print off these questions, please don't worry – simply have a go at writing the calculations and answers in your book or on a piece of paper!**

**Monday 30.03.20**

Write in the missing numbers.

  + 75 = 90

4 ×  = 200

Write in the missing numbers.

  + 65 = 125

6 ×  = 120

Write in the missing numbers.

  + 32 = 80

8 ×  = 400

Write in the missing numbers.

  + 85 = 200

120 - 51 =

Write in the missing numbers.

  + 65 = 150

150 - 78 =

Write in the missing numbers.

  + 42 = 300

200 - 76 =

Each missing digit in this calculation is **2, 5 or 7**

Write in the missing digits.


You may use each digit more than once.


$$\square + \begin{array}{|c|c|} \hline 1 & 8 \\ \hline \end{array} = \begin{array}{|c|c|} \hline \square & \square \\ \hline \end{array}$$

Each missing digit in this calculation is **2, 5 or 7**

Write in the missing digits.

You may use each digit more than once.


$$\square + \begin{array}{|c|c|} \hline 2 & 2 \\ \hline \end{array} = \begin{array}{|c|c|} \hline \square & \square \\ \hline \end{array}$$

Each missing digit in this sum is a **9** or a **1**

Write in the missing digits.


$$\begin{array}{|c|c|} \hline \square & \square \\ \hline \end{array} + \begin{array}{|c|c|} \hline \square & \square \\ \hline \end{array} + \begin{array}{|c|c|} \hline \square & \square \\ \hline \end{array} = 201$$

Each missing digit in this sum is an **8** or a **2**

Write in the missing digits.


$$\begin{array}{|c|c|} \hline \square & \square \\ \hline \end{array} + \begin{array}{|c|c|} \hline \square & \square \\ \hline \end{array} + \begin{array}{|c|c|} \hline \square & \square \\ \hline \end{array} = 132$$

Here are four digit cards.



Use each of the digits **once** to make a **total that is a multiple of 5**


$$\begin{array}{|c|c|} \hline \square & \square \\ \hline \end{array} + \begin{array}{|c|c|} \hline \square & \square \\ \hline \end{array}$$

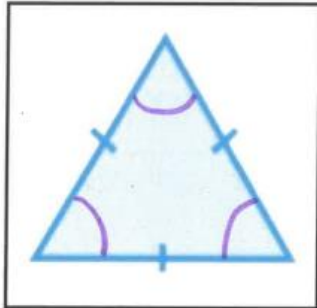
Here are four digit cards.



Write in **three** of the digits to make **the total nearest to 1000**

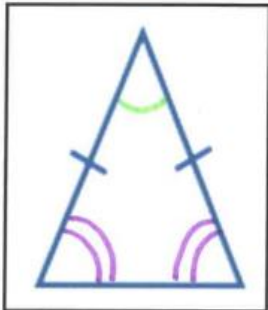
$$650 + \begin{array}{|c|c|c|} \hline \square & \square & \square \\ \hline \end{array} =$$

Tuesday 31.03.20



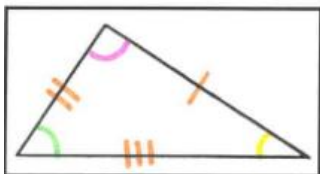
An Equilateral Triangle

- All sides are the same
- All angles are equal



An Isosceles Triangle

- Two of the sides are equal
- Two of the angles are equal



A Scalene Triangle

- All sides are different
- All angles are different.

I have an isosceles triangle.  
One angle measures 42 degrees.

What could the other angles measure?

Alex



My angles are  $70^\circ$ ,  $70^\circ$  and  $40^\circ$

My angles are  $45^\circ$ ,  $45^\circ$  and  $90^\circ$

Mo



Eva



My angles are  $60^\circ$ ,  $60^\circ$  and  $60^\circ$

What type of triangle is each person describing?

Explain how you know.

A shaded **isosceles** triangle is drawn inside a rectangle.

Not to scale

Calculate the size of angle  $a$ .

Not to scale

Calculate the size of angles  $a$  and  $b$ .  
Do **not** measure the angles.

$a =$   °

$b =$   °

1 mark

1 mark

Calculate the missing angle:

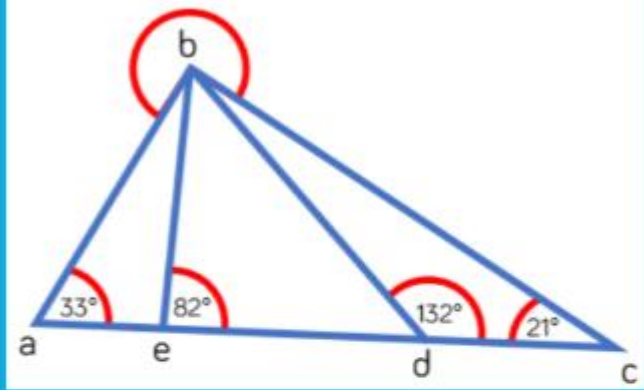
Now try a brain-buster or two:

The diagram shows an isosceles triangle and a square on a straight line.

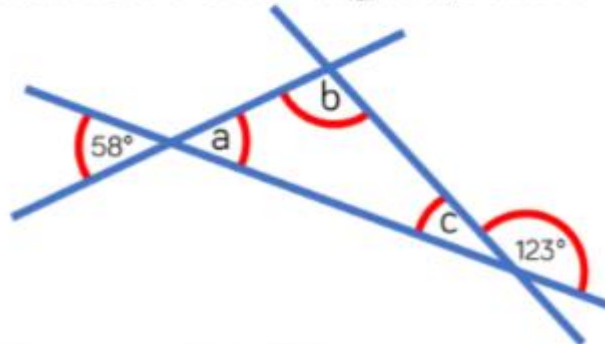
Not to scale

Calculate angle  $a$ .

Calculate the size of the reflex angle b.



Calculate the size of angles a, b and c.



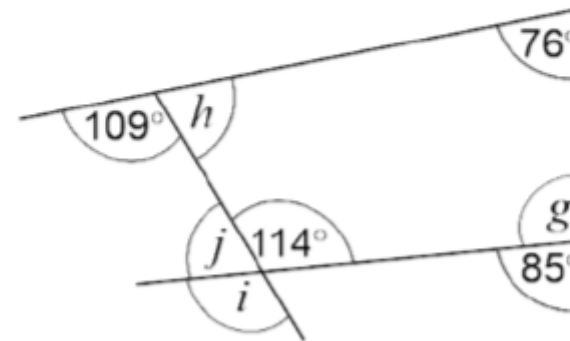
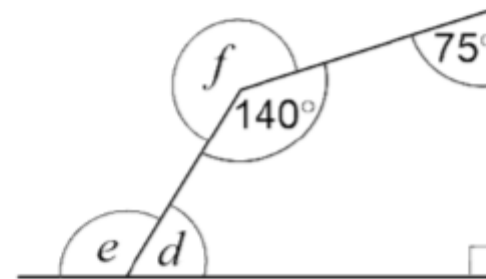
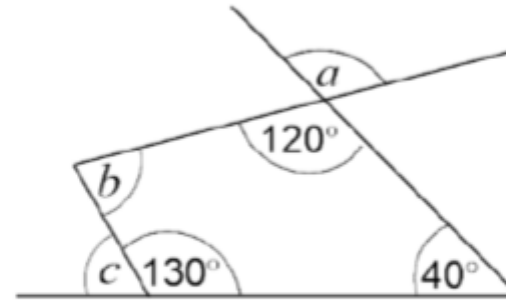
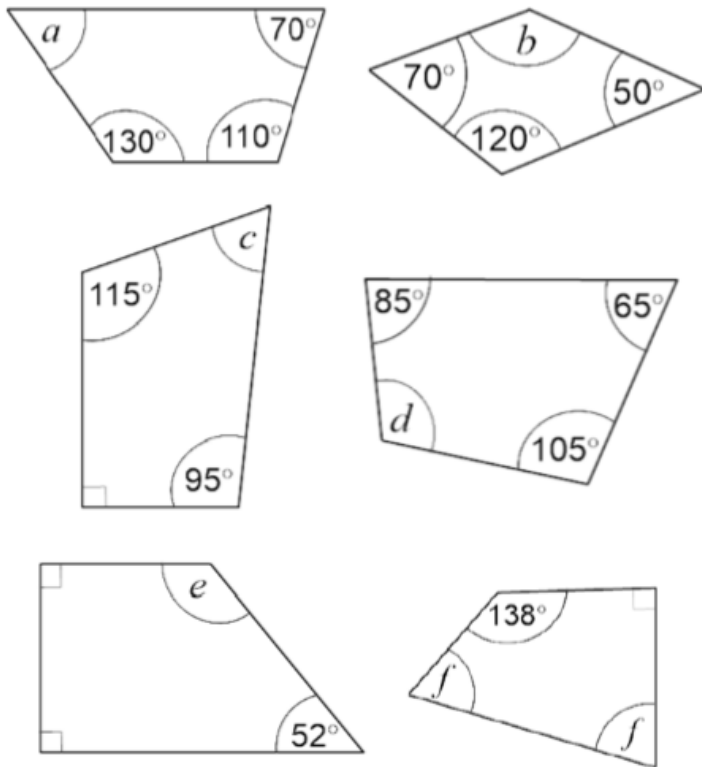
Give reasons for all of your answers.

**Wednesday 01.04.20**



Use what you already know about angles on a straight line, opposing angles and angles around a point to help you calculate the missing angles:

If the angles within a quadrilateral add up to  $360^\circ$ , can you work out the missing angles:



Try this brain-buster...

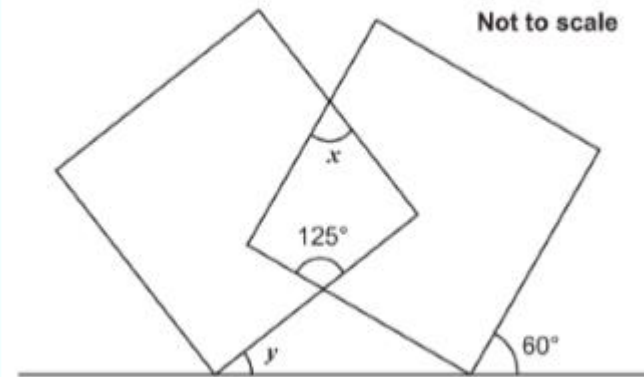
Jack says,



All quadrilaterals have at least one right angle.

Draw two different shapes to prove Jack wrong. Measure and mark on the angles.

The diagram shows two overlapping squares and a straight line.



Calculate the value of **angle x** and the value of **angle y**.

Do **not** use a protractor (angle measurer).

**Thursday 02.04.20**

**Key**

Acute  
 Obtuse  
 Right angle

Acute angles are less than/more than  $90^\circ$ .  
 Obtuse angles are less than/more than  $90^\circ$ , but less than/more than  $180^\circ$ .

- Choose 3 colours, fill in the key, then colour the angles as appropriate.
- Estimate the sizes of the angles by comparing them to right angles and straight lines.

**Estimates:**

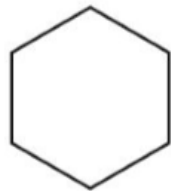
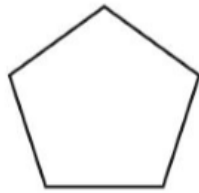
1)	6)	11)
2)	7)	12)
3)	8)	13)
4)	9)	14)
5)	10)	15)

Kirsty says,

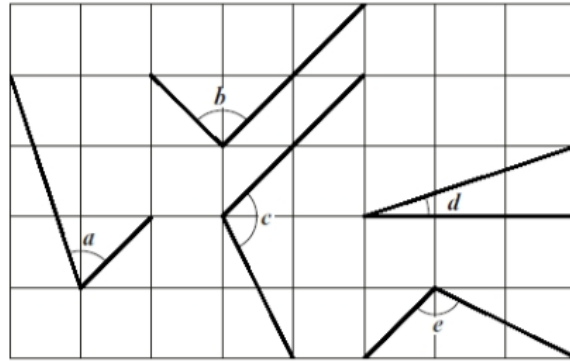
When you double the size of an acute angle, you always get an obtuse angle.

Explain why Kirsty is **not** correct.

Circle the **pentagon** with exactly **four acute angles**.



Here are five angles marked on a grid of squares.



Write the letters of the angles that are **obtuse**.

\_\_\_\_\_

Write the letters of the angles that are **acute**.

\_\_\_\_\_

**Friday 03.04.20**



**Where can I complete further work?**

[Twinkl](#) – Subscription service used by schools is offering a free premium service for teachers, parents and children to use whilst schools are closed. Enter the code **UKTWINKLHELPS** for access to worksheets, powerpoints and interactive games to support all areas of learning.

[Classroom Secrets](#) – Free Maths, Reading and Grammar home learning packs and interactive resources for all ages.

[White Rose Maths](#) – Free Maths home learning resources for all ages. Watch the videos and try the questions.

[Primary Stars](#) – Free Maths home learning packs for Year 1 and 2.

[BBC Bitesize Primary](#) – Free learning resources available for KS1 and KS2 across all subjects.

[I See Maths](#) – Free daily home maths lessons hosted by Gareth Metcalfe. Follow the link for videos, information and resources.

[Top Marks](#) – Free educational resources and games for English and Maths.

[ICT Games](#) – Free educational resources and games for English and Maths.