

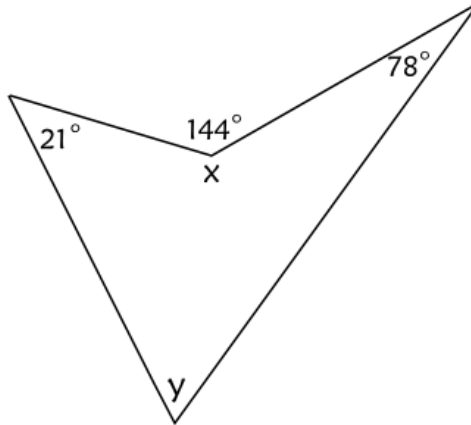


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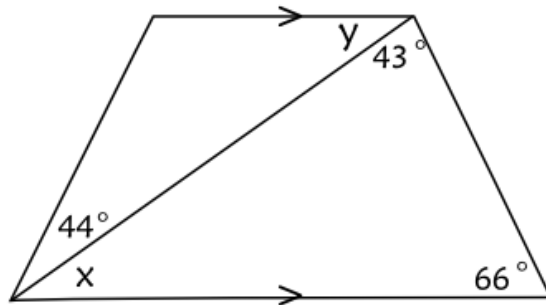
Quadrilaterals

1. Calculate the required angles.

1.1

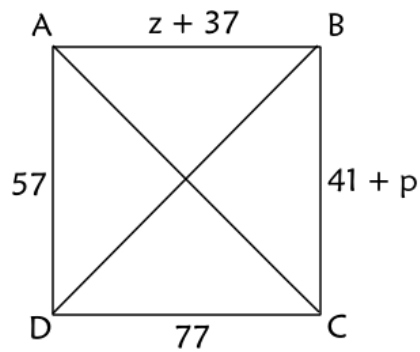


1.2



2. Calculate the required sides.

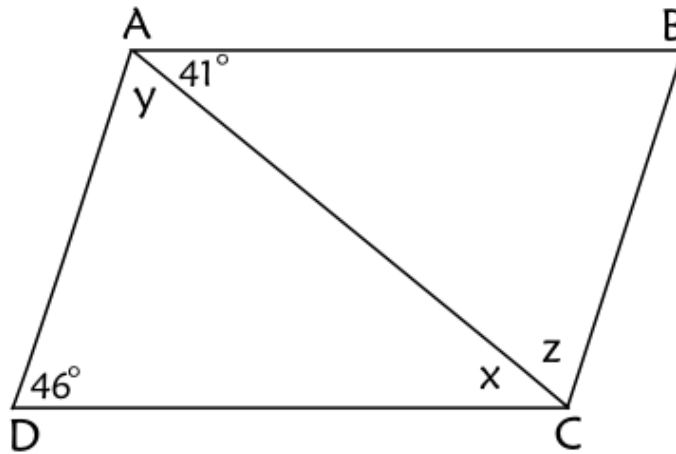
2.1 If ABCD is a square calculate the values of p and z



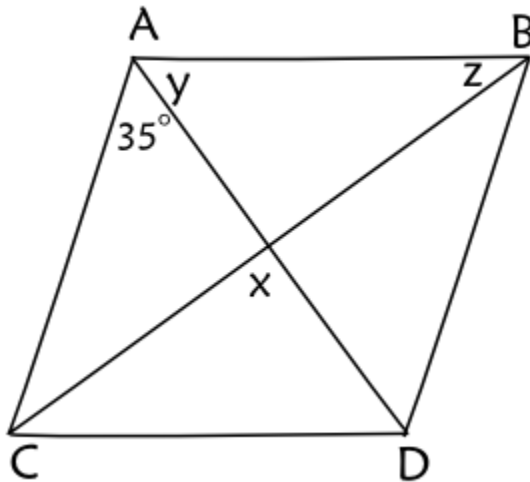


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2.2 If ABCD is a parallelogram, calculate the variables.



2.3 If ABCD is a rhombus, calculate the variables.

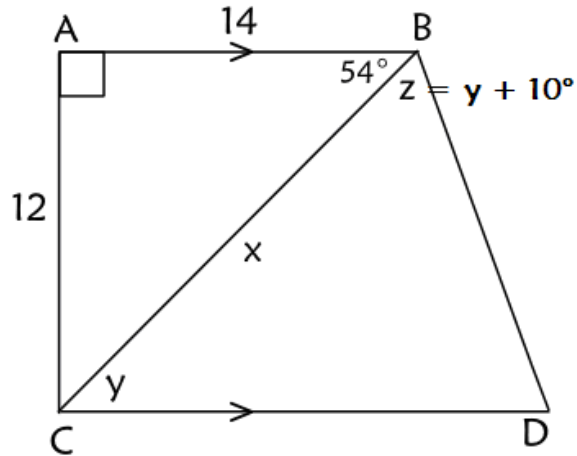




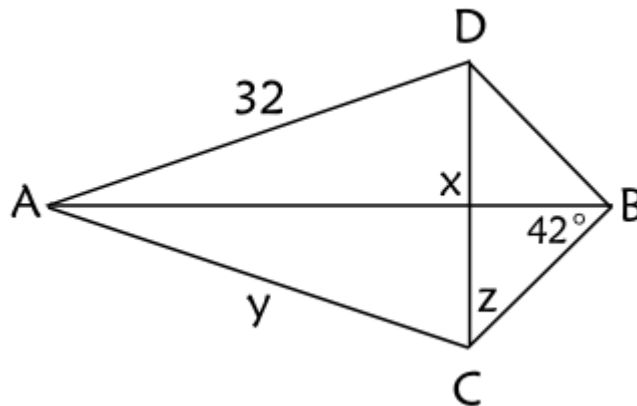
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2.4 If ABCD is a trapezium, calculate the variables.



2.5 If ABCD is a kite calculate the values of the variables.



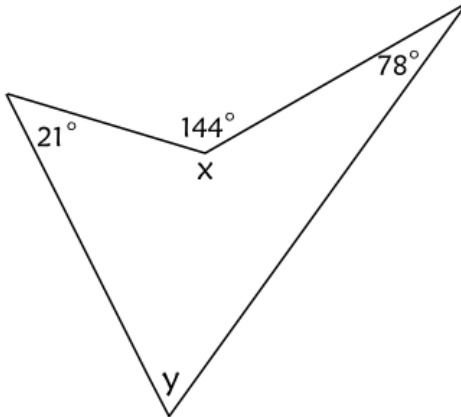


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MEMO

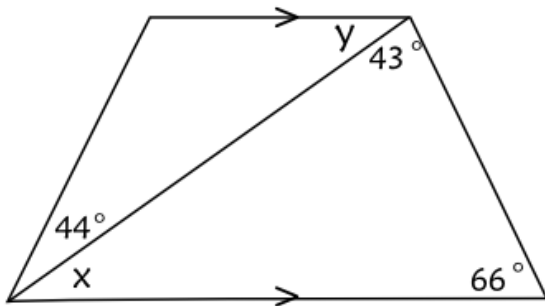
1. Calculate the required angles.

[8.4.2.1; 8.4.3.1;



$$\begin{aligned}
 x + 144^\circ &= 360^\circ \text{ (rotation)} \\
 x &= 360^\circ - 144^\circ \\
 x &= 216^\circ
 \end{aligned}$$

1.2

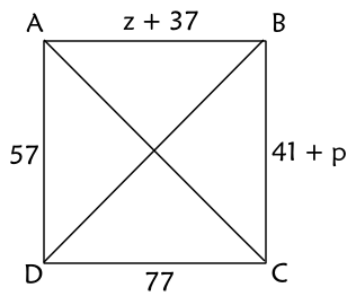


$$\begin{aligned}
 66^\circ + 43^\circ + x &= 180^\circ \text{ (int. <'s)} \\
 x &= 180^\circ - 66^\circ - 43^\circ \\
 x &= 71^\circ \\
 y &= x \text{ (alternate <'s)} \\
 y &= 71^\circ
 \end{aligned}$$

2. Calculate the required sides.

[8.4.3.1; 8.4.4.2; 8.4.5.2; 8.4.6]

2.1 If ABCD is a square calculate the values of p and z.

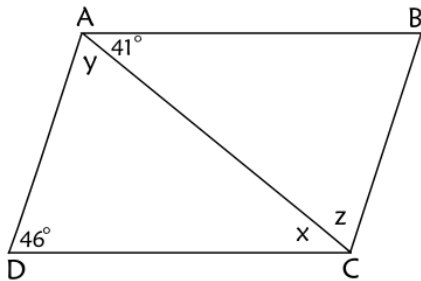


$$\begin{aligned}
 z + 37 &= 77 \\
 z &= 77 - 37 \\
 z &= 40 \\
 41 + p &= 57 \\
 p &= 57 - 41 \\
 p &= 16
 \end{aligned}$$



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2.2 If ABCD is a parallelogram, calculate the variables.



$$x = 41^\circ \text{ (alternate } \angle\text{'s)}$$

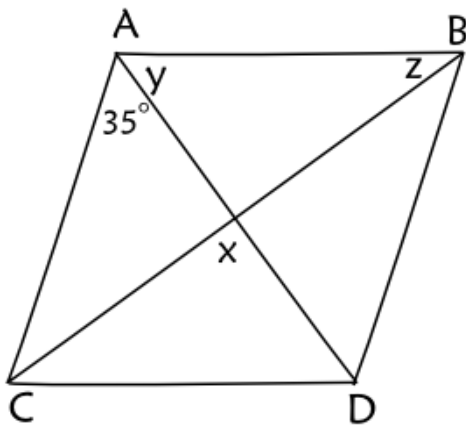
$$x + y + 46^\circ = 180^\circ \text{ (int. } \angle\text{'s)}$$

$$41^\circ + y + 46^\circ = 180^\circ$$

$$y = 180^\circ - 41^\circ - 46^\circ$$

$$y = 93^\circ$$

2.3 If ABCD is a rhombus, calculate the variables.



$$x = 90^\circ \text{ (diagonals intersect perp.)}$$

$$y = 35^\circ \text{ (diagonals bisect } \angle\text{'s)}$$

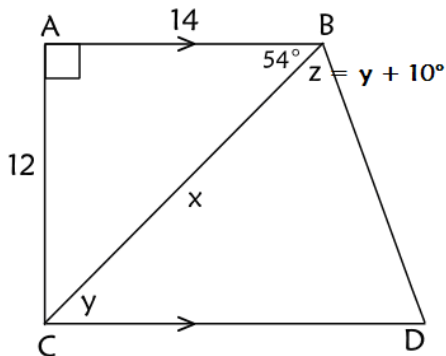
$$2z + 2y = 180^\circ \text{ (co-interior } \angle\text{'s)}$$

$$2z + 70^\circ = 180^\circ$$

$$2y = 110^\circ$$

$$y = 55^\circ$$

2.4 If ABCD is a trapezium, calculate the variables.



$$y = 54^\circ \text{ (alternate } \angle\text{'s)}$$

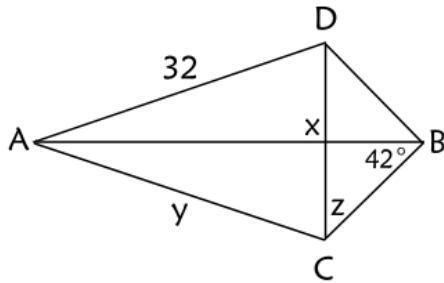
$$z = y + 10^\circ \text{ (given)}$$

$$z = 64^\circ$$



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2.5 If ABCD is a kite calculate the values of the variables.



$$x = 90^\circ \quad (\text{diagonals of a kite})$$

$$z + 42^\circ + 90^\circ = 180^\circ \quad (\text{int. } \angle\text{'s})$$

$$z = 180^\circ - 42^\circ - 90^\circ$$

$$z = 48^\circ$$

