Exam Style Questions

**Similar Shapes: Sides**

Ensure you have: Pencil, pen, ruler, protractor, pair of compasses and eraser

You may use tracing paper if needed

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**Guidance**

1. Read each question carefully before you begin answering it.
2. Don’t spend too long on one question.
3. Attempt every question.
4. Check your answers seem right.
5. Always show your workings

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**Revision for this topic**

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Video 292

Video 294
Rectangles $ABCD$ and $EFGH$ are similar.

$AB = 3\text{cm}$  
$BC = 7\text{cm}$  
$EF = 9\text{cm}$

Work out the length of FG.

$\text{.................cm}$  
(2)
2. Triangles ABC and DEF are similar.

AB = 4cm
AC = 5cm
DE = 16cm
EF = 17cm.

(a) Work out the length of DF.

....................... cm
(2)

(b) Work out the length of BC.

....................... cm
(2)
3. Trapezium S and trapezium T are similar.

(a) Find the size of x.

(b) Find the size of y.
4. Shown below are two similar triangles.

(a) Find the size of $x$.  

(b) Find the size of $y$.  

\[ \text{................................cm} \]  

\[ \text{(2)} \]  

\[ \text{................................cm} \]  

\[ \text{(2)} \]
Rectangles $ABCD$ and $EFGH$ are similar.

$AB = 5\text{cm}$
$BC = 9\text{cm}$
$EF = 8\text{cm}$

Work out the length of $FG$.

$\ldots\ldots\ldots\ldots\ldots\text{cm}$ (2)
6. The diagram shows three similar rectangles.

(a) Work out the value of $x$.

\[
\text{........................cm} \quad (2)
\]

(b) Work out the value of $y$.

\[
\text{........................cm} \quad (2)
\]
Triangle \( ABC \) is similar to triangle \( ADE \).

\[ \begin{align*}
AB &= 8\text{cm} \\
BC &= 6\text{cm} \\
BD &= 4\text{cm}
\end{align*} \]

Work out the length of \( DE \).

\[ \text{.................cm} \]

\( (3) \)
Triangle $ABC$ is similar to triangle $ADE$.

$AB = 6 \text{cm}$
$BC = 8 \text{cm}$
$CE = 6.25 \text{cm}$
$DE = 18 \text{cm}$

(a) Work out the length of $DB$.

\[ \text{\underline{Answer}} \ldots \text{cm} \]

(b) Work out the length of $AC$.

\[ \text{\underline{Answer}} \ldots \text{cm} \]
ACE and BCD are straight lines. DE is parallel to AB.

(a) Work out the size of CE.

..................cm

(3)

(b) Work out the size of AB.

..................cm

(3)
10. MNO and LNP are straight lines.
LM and OP are parallel.

(a) Explain why triangles LMN and NOP are similar
Give clear reasons for each statement you make.

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(b) Work out the length of MO.

.......................cm

(3)
11.

DEF and GHI are similar right angled triangles.
DE = 15cm
DF = 8cm
GI = 28cm

Work out the length of HI