EXAM-STYLE CLASS TEST

MARKS	DURATION	QUESTIONS
31	50 minutes	3

Name: _____ Class: _____

Date: _____

MARK ____ / 31

INSTRUCTIONS AND INFORMATION

1. Answer **ALL** the questions in this question paper.
2. Answer QUESTION 1 by **circling** the letter (A–D) in the answer grid at the end of that section.
3. Show **ALL** calculations clearly.
4. Show all units where applicable.
5. Number the answers correctly according to the numbering system used in this question paper.
6. A non-programmable calculator may be used, unless stated otherwise.
7. Write neatly and legibly.

QUESTION 1 [10 MARKS]

Four options are given as possible answers to the following questions. Choose the correct answer and circle the letter (A–D) in the grid at the end of this section. If you want to change your choice, put a cross through the wrong letter and circle your new choice.

1.1 Which one of the following is NOT a condition for congruency? (1)

A) RHS **B)** SSS
C) SAS **D)** AAA

1.2 △ABC ≡ △DEF means the two triangles are ... (1)

A) equal in area only **B)** similar only
C) the same shape AND the same size **D)** the same shape only

1.3 Which of the following is enough to prove that two triangles are SIMILAR? (1)

A) two pairs of sides in the same ratio **B)** two pairs of equal angles
C) one pair of equal sides **D)** one pair of equal angles

1.4 In △ABC ≡ △PQR, the angle equal to $\hat{B}$ is ... (1)

A) $\hat{R}$ **B)** $\hat{P}$
C) $\hat{A}$ **D)** $\hat{Q}$

1.5 Two triangles have equal hypotenuses and one other pair of equal sides, and both are right-angled. They are congruent by ... (1)

A) RHS **B)** SAS
C) SSS **D)** AAA

1.6 Equiangular triangles are always ... (1)

A) right-angled **B)** the same size

C) similar **D)** congruent

1.7 $\triangle ABC \,|||\, \triangle DEF$ with $AB = 8$, $DE = 4$ and $BC = 10$. Then $EF =$ ... (1)

A) 20 **B)** 5

C) 10 **D)** $2{,}5$

1.8 In similar triangles, corresponding SIDES are ... (1)

A) equal **B)** in the same ratio

C) perpendicular **D)** supplementary

1.9 Which pair of triangles must be congruent? (1)

A) both with the same area **B)** both with angles $30°$, $60°$, $90°$

C) both with sides 3, 4, 5 **D)** both right-angled

1.10 A photograph is enlarged by a factor of 4. Its PERIMETER is multiplied by ... (1)

A) 4 **B)** 8

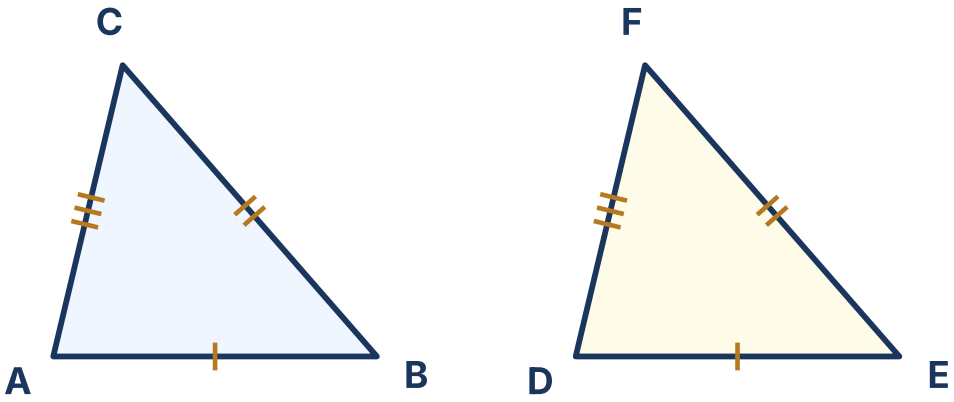
C) 16 **D)** 2

ANSWER GRID — CIRCLE YOUR ANSWERS FOR QUESTION 1

1.1	A	B	C	D
1.2	A	B	C	D
1.3	A	B	C	D
1.4	A	B	C	D
1.5	A	B	C	D
1.6	A	B	C	D
1.7	A	B	C	D
1.8	A	B	C	D
1.9	A	B	C	D
1.10	A	B	C	D

QUESTION 2 [11 MARKS]

Study the two triangles in the diagram below. *The diagrams are not drawn to scale.*



matching ticks show equal sides

2.1 Write down the condition of congruency that proves △ABC ≡ △DEF, and explain why that condition is enough. **(4)**

STATEMENT	REASON

2.2 Explain why the ORDER of the letters matters when you write △ABC ≡ △DEF. **(3)**

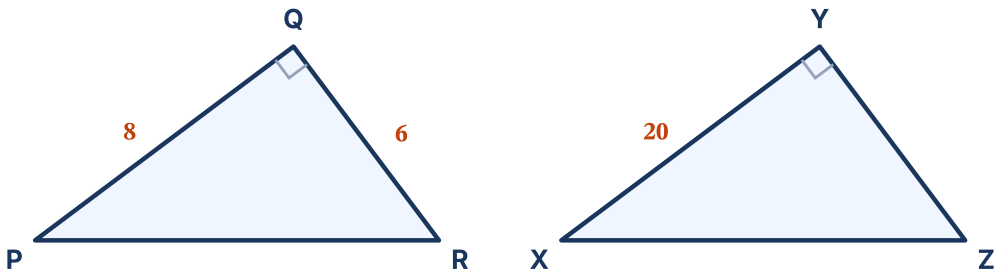
STATEMENT	REASON

2.3 A learner claims that AAA proves two triangles congruent. Explain why the learner is wrong, and state what AAA DOES prove. **(4)**

STATEMENT	REASON

QUESTION 3 [10 MARKS]

△PQR and △XYZ are similar. PQ = 8 cm, QR = 6 cm and XY = 20 cm. △PQR is right-angled at Q.



△PQR △XYZ

3.1 Calculate the scale factor from △PQR to △XYZ. (3)

3.2 Hence calculate the length of YZ. (3)

3.3 Calculate the length of PR, and hence the length of XZ. (4)

STATEMENT	REASON

TOTAL: 31 marks

This question paper consists of 3 questions.

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