ARIZONA GEOMETRY · UNIT 1 · 25 QUESTIONS

Congruence and Similarity — Practice Test

This practice test was made by AI and there may be mistakes. If a question or answer looks wrong, use the Flag a mistake button so it can be fixed.

1 **Two triangles have two pairs of corresponding sides equal and the angle between those sides equal. The criterion is**



A SSS

B SAS

C ASA

D AAS

Understand It with Pulse | Flag a mistake

2 **Two triangles have two pairs of corresponding angles equal and the side between those angles equal. The criterion is**

A ASA

B SSS

C AAS

D HL

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3 **Triangle ABC is congruent to triangle DEF. Angle A measures 42° and angle B measures 71°. Angle F measures**

A 42°

B 71°

C 67°

D 113°

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4 **Two similar triangles have a linear scale factor of 2:7. The smaller triangle has perimeter 24. The larger perimeter is**



A 12

B 48

C 84

D 168

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5

Two similar figures have a linear scale factor of 1:4. The smaller figure has area 9. The larger area is

A 36

B 144

C 9

D 81

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6 **Under a dilation centered at the origin with scale factor 2, the point (-3, 4) maps to**



A (6, 8)

B (-6, 8)

C (-3, 8)

D (-6, 4)

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7 **The point (4, -7) reflected across the x -axis maps to**

A (-4, -7)

B (4, 7)

C (-4, 7)

D (4, -7)

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8 **The point (3, 6) rotated 90° counterclockwise about the origin maps to**



A (6, -3)

B (-6, 3)

C (6, 3)

D (-3, 6)

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9 **Under the translation (x + 5, y - 2), the point (-1, 8) maps to**

A (4, 6)

B (-6, 10)

C (4, 10)

D (-6, 6)

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10 **The point (-2, -5) rotated 180° about the origin maps to**

A (2, 5)

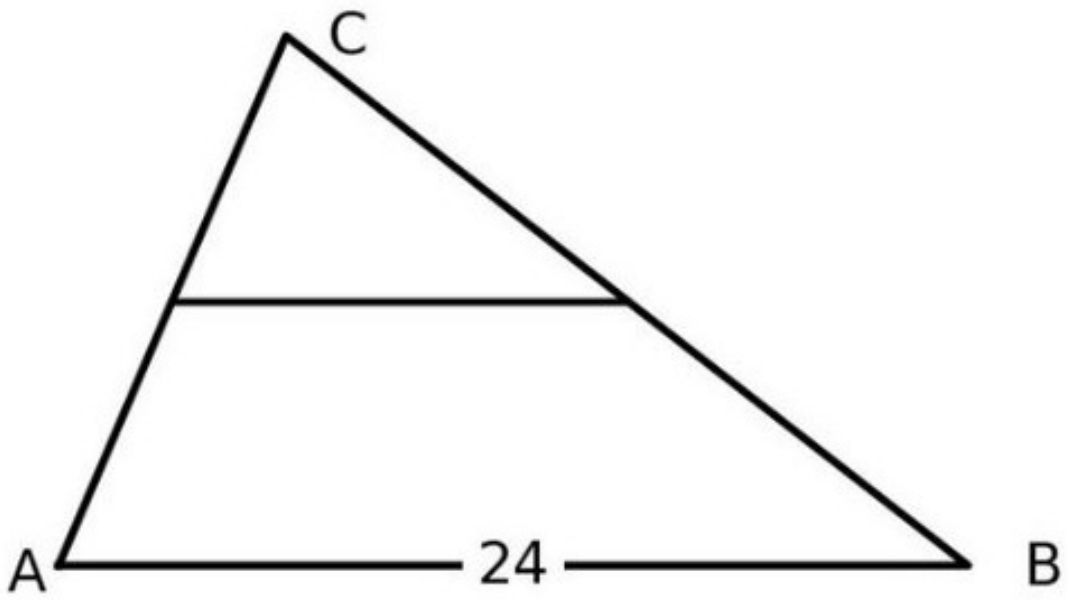
B (-2, 5)

C (5, 2)

D (-5, -2)

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11 **The triangle shown has a midsegment drawn parallel to the base. The base is labelled in the diagram. The length of the midsegment is**



A 12

B 24

C 48

D 6

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12 **A line parallel to one side of a triangle divides another side into segments of lengths 3 and 9, and divides the third side into segments of lengths 4 and x. The value of x is**

A 12

B 6

C 36

D 27

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13 **Two similar triangles have corresponding sides 6 and 18. Another side of the smaller triangle is 5. The corresponding side is**

A 15

B 10

C 30

D 3

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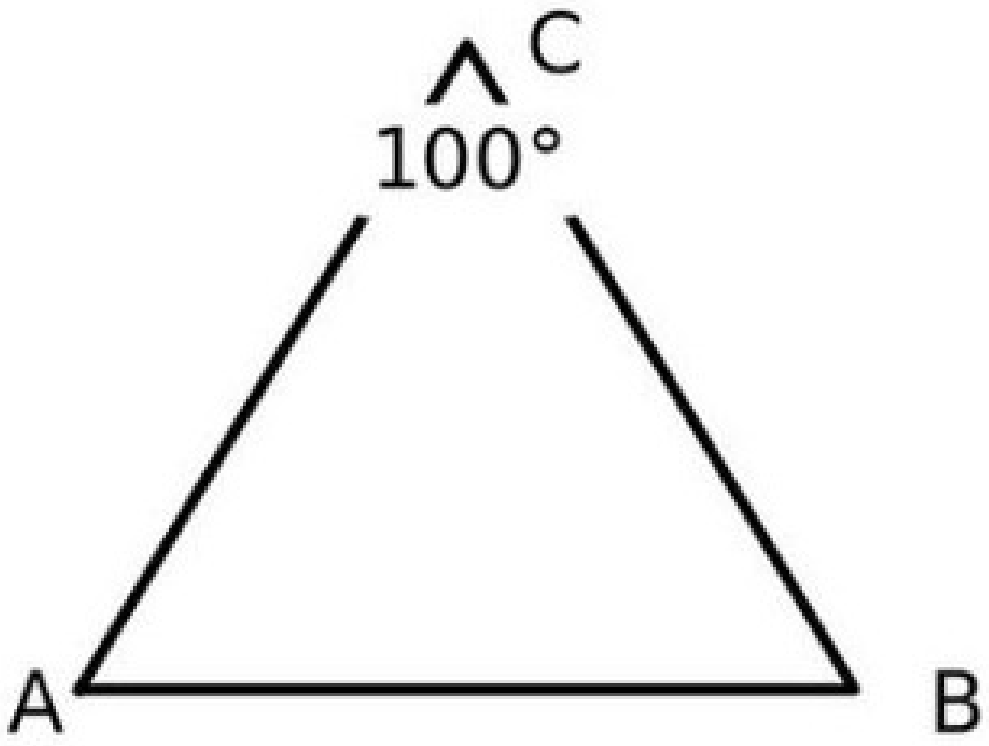
14 **Two similar triangles have shortest sides 5 and 20. The longest side of the smaller triangle is 11. The longest side of the larger triangle is _____**

Type your answer

Understand It with Pulse | Flag a mistake

15

An isosceles triangle has a vertex angle of 100°. Each base angle measures



A 100°

B 40°

C 80°

D 50°

Understand It with Pulse

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16

An exterior angle of a triangle measures 130°. One remote interior angle measures 70°. The other remote interior angle measures

A 60°

B 70°

C 130°

D 50°

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17 A triangle has two sides of lengths 7 and 13. The greatest possible whole number length of the third side is



A 20

B 19

C 21

D 6

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18 **A triangle has two sides of lengths 4 and 9. Which length could be the third side?**

A 4

B 5

C 10

D 14

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19 **A triangle has angles measuring 55° and 65°. The third angle measures**



A 120°

B 60°

C 55°

D 65°

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20 **One triangle has angles 58° and 74°. Another triangle has angles 58° and 48°. The triangles are similar by**

A not similar

B SSS

C AA

D SAS

Understand It with Pulse | Flag a mistake

21 **One triangle has sides 5, 7, and 9. Another has sides 10, 14, and 18. The triangles are**

A similar by SAS

B similar by SSS

C not similar

D similar by AA

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22 **One triangle has sides 7 and 10 with included angle 40°. Another has sides 14 and 20 with included angle 40°. The triangles are similar by**

A AA

B SSS

C SAS

D not similar

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23 **Two similar triangles have areas 36 and 144. A side of the smaller triangle is 12. The corresponding side of the larger triangle is ____**

Type your answer

Understand It with Pulse | Flag a mistake

24 **A figure has perimeter 48. Under a dilation with scale factor 0.25, the perimeter of the image is ____**

Type your answer

Understand It with Pulse | Flag a mistake

25 **Which transformation does NOT always map a figure to a congruent figure?**

A translation

B rotation

C dilation with scale factor 2

D reflection

Understand It with Pulse

Flag a mistake

ANSWER KEY

1.	B	**10.**	A	**19.**	B
2.	A	**11.**	A	**20.**	C
3.	C	**12.**	A	**21.**	B
4.	C	**13.**	A	**22.**	C
5.	B	**14.**	44	**23.**	24
6.	B	**15.**	B	**24.**	12
7.	B	**16.**	A	**25.**	C
8.	B	**17.**	B		
9.	A	**18.**	C		

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