GEOMETRY · NEW JERSEY

Geometry

Practice Test

Unit 1: Congruence and Similarity

25 Questions

Original practice test based on the New Jersey curriculum. Work through each question, then check your answers at the end.

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 to let Brett know so he can fix it.

© 2026 Brett Robbins. All Rights Reserved.



Question 1

Two triangles have all three pairs of corresponding sides equal. The congruence criterion that applies is

A) SSS

B) SAS

C) ASA

D) AAS

Understand It with Pulse

Flag a mistake

Question 2

Two triangles have two pairs of corresponding sides equal, and the included angles are equal. The congruence criterion is

A) ASA

B) SAS

C) SSS

D) AAS

Understand It with Pulse

Flag a mistake

© 2026 Brett Robbins. All Rights Reserved.

Question 3

Two triangles have two pairs of corresponding angles equal, and the included sides are equal. The congruence criterion is

A) SSS

B) AAS

C) ASA

D) HL

Understand It with Pulse

Flag a mistake

Question 4

Two right triangles have equal hypotenuses and one pair of equal legs. The congruence criterion that applies is

A) SSS

B) SAS

C) ASA

D) HL

Understand It with Pulse

Flag a mistake

© 2026 Brett Robbins. All Rights Reserved.



Question 5

Triangle *ABC* is congruent to triangle *DEF*. Angle *A* measures 40° and angle *B* measures 70°. Angle *F* measures

A) 40°

B) 110°

C) 70°

D) 50°

Understand It with Pulse

Flag a mistake

Question 6

Triangle *ABC* is similar to triangle *DEF*. Angle *A* measures 35° and angle *B* measures 75°. Angle *E* measures

A) 75°

B) 35°

C) 70°

D) 110°

Understand It with Pulse

Flag a mistake

© 2026 Brett Robbins. All Rights Reserved.

Question 7

A side of length 4 in one figure maps to a side of length 12 under a dilation. The scale factor is

A) 4

B) 3

C) 12

D) $\frac{1}{3}$

Understand It with Pulse

Flag a mistake



Question 8

Two similar triangles have a linear scale factor of $2:5$. The smaller triangle has perimeter 20. The larger perimeter is

A) 8

B) 20

C) 50

D) 100

Understand It with Pulse

Flag a mistake

© 2026 Brett Robbins. All Rights Reserved.

Question 9

Two similar figures have a linear scale factor of $1:4$. The smaller figure has area 5. The larger area is

A) 20

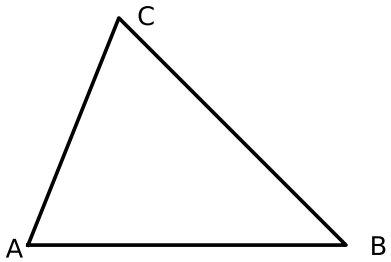
B) 9

C) 125

D) 80

Understand It with Pulse

Flag a mistake



Question 10

In a triangle, a midsegment is parallel to a base of length 14. The length of the midsegment is

A) 7

B) 14

C) 28

D) 3.5

Understand It with Pulse

Flag a mistake

© 2026 Brett Robbins. All Rights Reserved.

Question 11

A line parallel to one side of a triangle divides another side into segments of lengths 3 and 6, and divides the third side into segments of lengths 4 and x. The value of x is

A) 6

B) 8

C) 12

D) 2

Understand It with Pulse Flag a mistake

Question 12

Two similar triangles have shortest sides 6 and 9. The longest side of the smaller triangle is 10. The longest side of the larger triangle is ____

Understand It with Pulse Flag a mistake

© 2026 Brett Robbins. All Rights Reserved.



Question 13

Under a dilation centered at the origin with scale factor 2, the point $(2,\ 3)$ maps to

A) $(1,\ 1.5)$

B) $(2,\ 6)$

C) $(4,\ 6)$

D) $(4,\ 3)$

Understand It with Pulse

Flag a mistake



Question 14

The point $(3,\ -4)$ reflected across the $x-$axis maps to

A) $(-3,\ -4)$

B) $(-3,\ 4)$

C) $(4,\ 3)$

D) $(3,\ 4)$

Understand It with Pulse

Flag a mistake

© 2026 Brett Robbins. All Rights Reserved.

Question 15

Under the translation $(x + 3, y - 2)$, the point $(-1, 5)$ maps to

A) $(2, 3)$

B) $(-4, 7)$

C) $(2, 7)$

D) $(-4, 3)$

Understand It with Pulse

Flag a mistake



Question 16

The point $(4, 1)$ rotated 90° counterclockwise about the origin maps to

A) $(1, -4)$

B) $(-1, 4)$

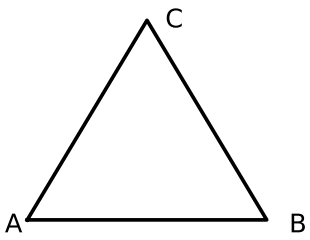
C) $(-4, 1)$

D) $(4, -1)$

Understand It with Pulse

Flag a mistake

© 2026 Brett Robbins. All Rights Reserved.



Question 17

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

A) 80°

B) 50°

C) 40°

D) 100°

Understand It with Pulse | Flag a mistake

Question 18

An exterior angle of a triangle measures 130°. One remote interior angle measures 50°. The other remote interior angle measures

A) 50°

B) 130°

C) 180°

D) 80°

Understand It with Pulse | Flag a mistake

© 2026 Brett Robbins. All Rights Reserved.

Question 19

Two similar triangles have corresponding sides 9 and 12. Another side of the smaller triangle is 15. The corresponding side is

A) 20

B) 11.25

C) 15

D) 27

Understand It with Pulse | Flag a mistake

Question 20

Two similar triangles have areas 16 and 81. A side of the smaller triangle is 12. The corresponding side of the larger triangle is ____

Understand It with Pulse | Flag a mistake

Question 21

A triangle has two sides of lengths 5 and 7. The greatest possible whole number length of the third side is

A) 12

B) 11

C) 13

D) 2

Understand It with Pulse | Flag a mistake

© 2026 Brett Robbins. All Rights Reserved.

Question 22

One triangle has sides 3, 4, and 5. Another has sides 6, 8, and 10. The triangles are

A) not similar

B) similar by AA

C) similar by SSS

D) similar by SAS

Understand It with Pulse Flag a mistake

Question 23

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

A) 120°

B) 60°

C) 55°

D) 65°

Understand It with Pulse Flag a mistake

Question 24

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

A) translation

B) reflection

C) rotation

D) dilation with scale factor 3

Understand It with Pulse Flag a mistake

© 2026 Brett Robbins. All Rights Reserved.

Question 25

A figure has perimeter 24. Under a dilation with scale factor 1.5, the perimeter of the image is ____

Understand It with Pulse | Flag a mistake

© 2026 Brett Robbins. All Rights Reserved.

ANSWER KEY

1. A
2. B
3. C
4. D
5. C
6. A
7. B
8. C
9. D
10. A
11. B
12. 15
13. C
14. D
15. A
16. B
17. C
18. D
19. A
20. 27
21. B
22. C
23. B
24. D
25. 36

© 2026 Brett Robbins. All Rights Reserved.