Congruent triangles: ASA and AAS worksheet – Grade 8

Grade 8 · Mixed level · 20 questions · **Version X6053**

Name: _____ Date: _____ Score: ___ / 20

Scan to check answers + earn stars

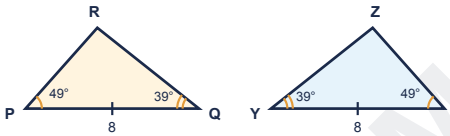
Done the worksheet? Scan the code (or enter version X6053 on this skill's page at themathmeridian.com) to check your answers online and earn stars.

1. △ABC ≅ △DEF. Which side is equal to AB?
   A. EF **B.** DE **C.** FD

2. △ABC ≅ △DEF. Which angle is equal to ∠A?
   A. ∠E **B.** ∠D **C.** ∠F

3. △PQR ≅ △XYZ. Which side is equal to QR?
   A. ZX **B.** XY **C.** YZ

4. Which rule shows these triangles are congruent?



   A. RHS **B.** SSS **C.** SAS **D.** ASA

5. △GHI ≅ △JKL. Which angle is equal to ∠H?
   A. ∠L **B.** ∠K **C.** ∠J

6. △PQR ≅ △XYZ. Which angle is equal to ∠P?
   A. ∠Z **B.** ∠X **C.** ∠Y

7. △ABC ≅ △DEF. Which side is equal to BC?
   A. EF **B.** FD **C.** DE

8. ∠G = ∠J, ∠H = ∠K and HI = KL. Which rule proves congruence?
   A. AAS **B.** ASA **C.** SAS **D.** SSS

9. △ABC ≅ △DEF. BC = 4x + 2 and EF = 10. Find x.

   Answer: _____

The Math Meridian

10. $\angle A = \angle D$, $\angle B = \angle E$ and $AB = DE$. Which rule proves congruence?

A. ASA **B.** AAS **C.** SAS **D.** SSS

11. $\angle L = \angle S$, $\angle M = \angle T$ and $MN = TU$. Which rule proves congruence?

A. AAS **B.** ASA **C.** SAS **D.** SSS

12. $\angle A = \angle D$, $\angle B = \angle E$ and $BC = EF$. Which rule proves congruence?

A. AAS **B.** ASA **C.** SAS **D.** SSS

13. $\triangle GHI \cong \triangle JKL$, and $GH = 10$ cm. How long is JK, in cm?

Answer: _____ cm

14. $\triangle ABC \cong \triangle DEF$, and $AB = 6$ cm. How long is DE, in cm?

Answer: _____ cm

15. $ABCD$ is a parallelogram and $\angle B = 112°$. What is $\angle D$, in degrees?

Answer: _____ °

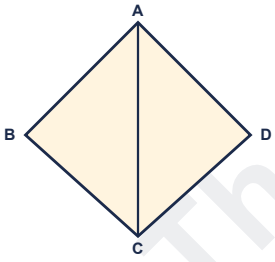
16. $\triangle GHI \cong \triangle JKL$ by ASA. $GH = 6x + 7$ and $JK = 61$. Find x.

Answer: _____

17. $PQRS$ is a parallelogram with diagonal PR. $PQ = 19$ cm. How long is RS, in cm?

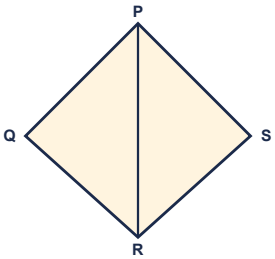
Answer: _____ cm

18. AC bisects $\angle BAD$ and $\angle BCD$. If $AB = 11$ cm, how long is AD, in cm?



Answer: _____ cm

19. PR bisects $\angle QPS$ and $\angle QRS$. Which rule shows $\triangle PQR \cong \triangle PSR$?

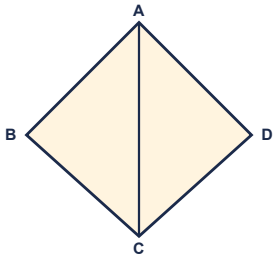


A. ASA, because side PR is shared **B.** SSS, because all sides are equal

C. RHS, because of a right angle **D.** They are not congruent

The Math Meridian

20. AC bisects ∠BAD and ∠BCD. Which rule shows △ABC ≅ △ADC?



A. ASA, because side AC is shared **B.** SSS, because all sides are equal

C. RHS, because of a right angle **D.** They are not congruent

The Math Meridian

Answer key · Version X6053

Congruent triangles: ASA and AAS worksheet – Grade 8 · Grade 8 · to reprint this sheet or check the answers, enter X6053 on the skill page.

1. **B (DE)**
2. **B (∠D)**
3. **C (YZ)**
4. **D (ASA)**
5. **B (∠K)**
6. **B (∠X)**
7. **A (EF)**
8. **A (AAS)**
9. **2**
10. **A (ASA)**
11. **A (AAS)**
12. **A (AAS)**
13. **10**
14. **6**
15. **112**
16. **9**
17. **19**
18. **11**
19. **A (ASA, because side PR is shared)**
20. **A (ASA, because side AC is shared)**

The Math Meridian