Congruent triangles: SSS worksheet – Grade 8

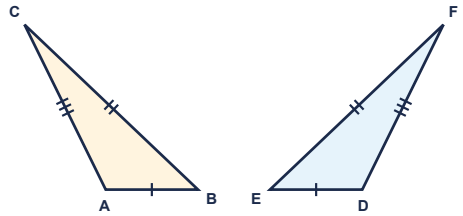
Grade 8 · Mixed level · 20 questions · **Version X3460**

Name: _____ Date: _____ Score: ___ / 20

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1. The tick marks show which sides are equal. Why are the triangles congruent?



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

2. △ABC ≅ △DEF, and BC = 10 cm. How long is EF, in cm?

   Answer: _____ cm

3. △GHI ≅ △JKL. Which side is equal to HI?

   A. LJ **B.** KL **C.** JK

4. △PQR ≅ △XYZ, and PQ = 12 cm. How long is XY, in cm?

   Answer: _____ cm

5. △LMN ≅ △STU, and NL = 11 cm. How long is US, in cm?

   Answer: _____ cm

6. △ABC ≅ △DEF. Which side is equal to BC?

   A. FD **B.** EF **C.** DE

7. △ABC ≅ △DEF. Which side is equal to AB?

   A. FD **B.** EF **C.** DE

8. △PQR ≅ △XYZ. Which angle is equal to ∠Q?

   A. ∠Z **B.** ∠X **C.** ∠Y

9. △LMN ≅ △STU. MN = 3x + 6 and TU = 33. Find x.

   Answer: _____

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10. △ABC ≅ △DEF. Is it also correct to write △ABC ≅ △EDF?

    A. Yes **B.** No

11. △LMN ≅ △STU. NL = 4x + 1 and US = 33. Find x.

    Answer: _____

12. △PQR ≅ △XYZ. Is it also correct to write △PQR ≅ △YXZ?

    A. Yes **B.** No

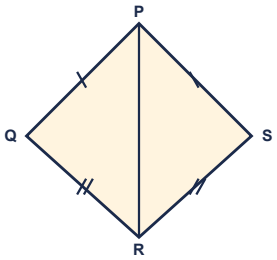
13. △PQR ≅ △XYZ. Which angle is equal to ∠P?

    A. ∠Y **B.** ∠X **C.** ∠Z

14. △PQR ≅ △XYZ, and QR = 11 cm. How long is YZ, in cm?

    Answer: _____ cm

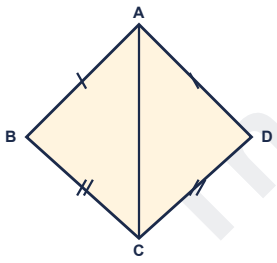
15. In the kite, PQ = PS and RQ = RS. Which reason shows △PQR ≅ △PSR?



    A. SSS, because the side PR is shared **B.** SAS, because the angles are equal

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

16. In the kite, AB = AD and CB = CD. If ∠BAC = 26°, what is ∠DAC, in degrees?



    Answer: _____ °

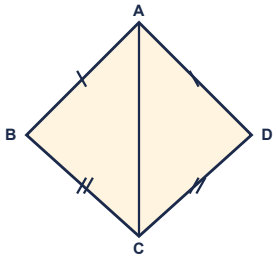
17. Why does knowing three pairs of equal angles not prove two triangles are congruent?

    A. The triangles could be different sizes **B.** Angles cannot be compared

    C. Three angles never add to 180° **D.** It always proves it

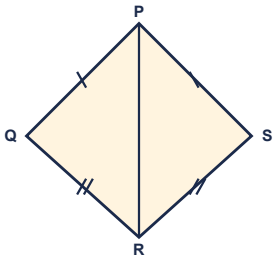
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18. In the kite, AB = AD = 6 cm and CB = CD = 9 cm. What is the perimeter, in cm?



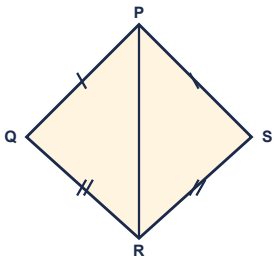
Answer: _____ cm

19. In the kite, PQ = PS = 8 cm and RQ = RS = 11 cm. What is the perimeter, in cm?



Answer: _____ cm

20. In the kite, PQ = PS and RQ = RS. If ∠QPR = 39°, what is ∠SPR, in degrees?



Answer: _____ °

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Answer key · Version X3460

Congruent triangles: SSS worksheet – Grade 8 · Grade 8 · to reprint this sheet or check the answers, enter X3460 on the skill page.

1. **D (SSS)**
2. **10**
3. **B (KL)**
4. **12**
5. **11**
6. **B (EF)**
7. **C (DE)**
8. **C (∠Y)**
9. **9**
10. **B (No)**
11. **8**
12. **B (No)**
13. **B (∠X)**
14. **11**
15. **A (SSS, because the side PR is shared)**
16. **26**
17. **A (The triangles could be different sizes)**
18. **30**
19. **38**
20. **39**

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