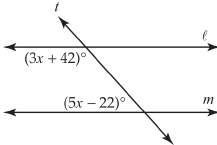
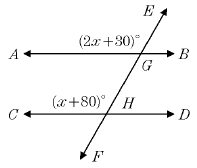
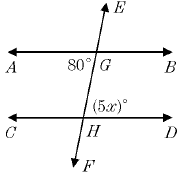
**Unit 5 Review - Reasoning with Geometry** NAME \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

**Geometric Properties**

*Solve for x.*

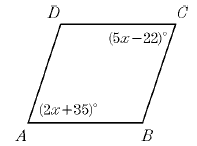
1. 2. 3. 

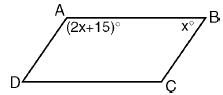
**Proofs with Lines and Triangles**

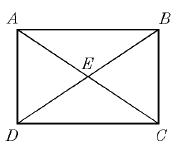
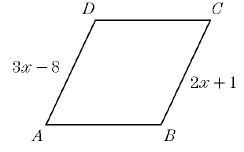
|  |  |
| --- | --- |
| 4. Given: a || b and c || d  Prove: ∠1 ≅ ∠16 | 5. Given: C is the midpoint of , ∠A ≅ ∠D  Prove: △ABC ≅ △DEC |
| 6. Given: ≅ , ||  Prove: △ABC ≅ △CDA | 7. Given: , ≅  Prove: △BAD ≅ △BCD |

**Properties of Parallelograms**

*Solve for x.*



8. 9.

10. 11. and 

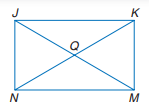
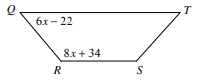
**Proofs with Parallelograms**

|  |  |  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
| 12. Given: ABCD is a parallelogram  Prove: △DEA ≅ △BEC       |  |  | | --- | --- | | Statement: | Reason: | | 1.  2. ≅  3. ∠DAC ≅ ∠BCA  4.  5. △DEA ≅ △BEC | 1. Given  2.  3.  4. Vertical angles  5. | | 13. Given: ABCD is a parallelogram, ≅  Prove: △ARD ≅ △CSB   |  |  | | --- | --- | | Statement: | Reason: | | 1.  2.  3. ∠DAB ≅ ∠BCD  4. △ARD ≅ △CSB | 1. Given  2.  3.  4. | |
| 14. Given: ABCD is a parallelogram  Prove: ∠DAC ≅ ∠BCA     |  |  | | --- | --- | | Statement: | Reason: | | 1. ABCD is a parallelogram  2. ≅  3.  4.  5. △DAC ≅ △BCA  6. ∠DAC ≅ ∠BCA | 1.  2.  3. Opposite sides of parallelogram are congruent.  4. Reflexive property  5.  6. | |  |

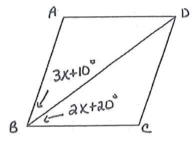
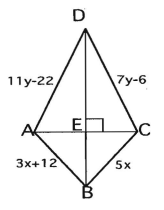
**Properties of Quadrilaterals**

*Solve for x (and y, if needed).*

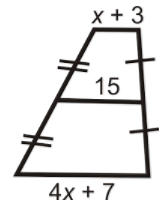
15. QTSR is a trapezoid. 16. KMNJ is a rectangle. and



17. ABCD is a rhombus. 18. ABCD is a kite.



19. Figure is a trapezoid.



**Proofs with Quadrilaterals**

|  |  |  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
| 20. Given: ABCD is an isosceles trapezoid  Prove: △ADC ≅ △BCD     |  |  | | --- | --- | | Statement: | Reason: | | 1.  2. ∠ADC ≅ ∠BCD  3. ≅  4.  5. △ADC ≅ △BCD | 1. Given  2.  3.  4. Legs of an isosceles trapezoid are congruent  5. | | 21. Given: ABCD is a rectangle  Prove: △ADE ≅ △BCE     |  |  | | --- | --- | | Statement: | Reason | | 1.  2. ≅  3. ||  4.  5. ∠AED ≅ ∠BEC  6. △ADE ≅ △BCE | 1. Given  2.  3.  4. Alternate interior angles  5.  6. | |
| 22. Given: ABCD is a rhombus  Prove: △DEC ≅ △BEC   |  |  | | --- | --- | | Statement: | Reason: | | 1.  2. ≅  3. ≅  4.  5. △DEC ≅ △BEC | 1. Given  2.  3.  4. Diagonals of a rhombus are perpendicular  5. | | 23. Given: ≅ , bisects ∠YXW  Prove: ≅   |  |  | | --- | --- | | Statement: | Reason | | 1. ≅ , bisects ∠YXW  2.  3. ≅  4. △YXO ≅ △WXO  5. ≅ | 1.  2. Definition of bisect  3.  4.  5. | |