## Answers to Chapter 9 Test Review

- 1. SAS
- 2. 58°
- 3. 61°
- 4.  $\overline{EF} \cong \overline{QR}$
- 5. SAS, HL, SSS
- 6. Will depend how you label vertices, but right angles are B and X and C is common angle then:  $\overline{AB} \cong \overline{CX} \ \overline{EF} \cong \overline{QR}$   $\overline{EF} \cong \overline{QR} \angle B \cong \angle X \angle BAC \cong \angle XCY$   $\angle ACB \cong \angle CYX$
- 7. SSS, SAS, ASA, AAS, HL
- 8. 13.4
- 9. (1, -2)
- 10.  $\triangle ABC \cong \triangle XYZ$
- 11. (3, 4, 5) (5, 12, 13) (8, 15, 17) (7, 24, 25) are just a few
- 12. SSS
- 13. HL or SSS
- 14. AAS
- 15. 68°
- 16. 32
- 17. ΔEDF
- 18. 13
- 19. A, B, C
- 20.(-3,-1)
- 21. (5, 1)
- 22. 71.06 sq. un.
- 23. 29.58
- 24. Yes, JZ = FZ b/c iso tri thrm, since JQ=FX (given) and QX=QX (reflexive), JX=FQ (seg add post and sub),  $\angle J=\angle F$  (given) so  $\Delta JZX \cong \Delta FZQ$  by SAS
- 25. Slope(m) of RE=3/2, m TC=3/2, m EC=-2/3, m RT=-2/3. Opp. Sides have same slope so opp sides parallel. Consecutive sides' slopes are opp reciprocals, so RE ⊥ EC. Parallelogram with a right angle is a rectangle.
- 26. directions
- 27.  $a_n = 12n + 11$ ,  $a_{15} = 191$
- 28.  $a_n = 5(6)^{n-1}$ ,  $a_{15} = 391,820,820,500$

29.  $y = 325,000(0.85)^t$ . \$46,228.57

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Additional Answers
14.
   1. Draw segment TV.
      (Two points determine
      a line.)
   2. TR = TW: VR = VW
      (Given)
   3. TV = TV (Identity)
   4. . A TWV = A TRV
      ((2), (3), SSS Post.)
   5. .. L W = L R
     ((4) CPCTC)
   1. AF = DC (Given)
   2. AC = DF ((1). Common
      Segment Theorem)
   3. ∠1 = ∠2; CB = FE
     (Given)
   4. \triangle ABC = \triangle DEF
     ((2), (3), SAS Post.)
   5. LA = LD
      ((4). CPCTC)
   1. \overline{UJ} = \overline{ST}; \angle TJU = \angle JTS
      (Given)
   2. \overline{JT} = \overline{JT} (Identity)
   3. AUJT = ASTJ
      ((1), (2), SAS Post.)
   4. \angle U = \angle S ((3). CPCTC)
   1. CA = CT (Given)
   2. LA = LT
      ((1). Isosceles Triangle
      Theorem)
   3. ∠1 = ∠2 (Given)
   4. LACO = LTCR
      ((3). Common Angle
      Theorem)
   5. AAGO = ATGR
      ((1), (2), (4). ASA Post.)
   6. 44 = 45
      ((5), CPCTC)
    1. \angle 4 = \angle 5 (Given)
    2. CR = CO ((1), Th. 3-3)
    3. AR = TO (Given)
    4. AO = TR ((3). Common
       Segment Theorem)
    5. ACAO = ACTR ((1), (2).
      (4). SAS Postulate)
    6. CA = CT((5), CPCTC)
                            125
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