

Geometry - 1.0 - Error List

April 27, 2015

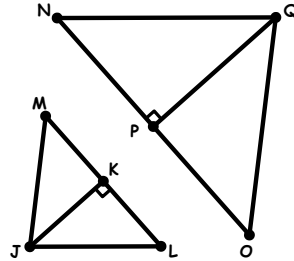
Errors in copies purchased from 2009 to the present:

- Problem Set 23, Practice B – The answer on the CD should be “If two angles are complementary to the same angle, then they are equal.”
- Problem Set 23, Problem 12 – The answer on the CD should be “If two angles are complementary to the same angle, then they are equal.”
- Lesson 29 – The third sentence of the second paragraph in this lesson should be “An isosceles triangle has at least two sides equal (congruent).”
- Lesson 29 – In the first diagram in this lesson, the figure in the top right should be “Isosceles triangle: at least two sides equal.”
- Problem Set 29, Problem 2 – Change the statement of this problem in the textbook and on the CD to “All isosceles triangles have three congruent sides.”
- Problem Set 29, Problem 22 – Change the statement of this problem in the textbook and on the CD to “If a triangle is isosceles, then it has at least two equal sides.”
- Problem Set 29, Problem 22 – The answer in the answer key and on the CD should say “If a triangle has at least two equal sides, then it is isosceles; True.”
- Problem Set 30, Problem 6 – The statement of this problem should be “A(n) _____ triangle has at least two congruent (equal) sides.”
- Problem Set 54, Practice 16 – The answer in the answer key should be “If both pairs of opposite sides are congruent, then a quadrilateral is a parallelogram.”
- Problem Set 57, Practice E – Steps two through four in the answer key and on the CD should be:
 - (2) $\overline{KN} \cong \overline{KL}$, $\overline{NJ} \cong \overline{LJ}$ (Definition of a rhombus)
 - (3) $\angle L \cong \angle N$ (Both pairs of opposite angles of a rhombus/parallelogram are congruent.)
 - (4) $\triangle JNK \cong \triangle JLK$ (S.A.S.)
- Problem Set 57, Problem 24 – Steps two through four in the answer key and on the CD should be:
 - (2) $\overline{AD} \cong \overline{AB}$, $\overline{DC} \cong \overline{BC}$ (Definition of a rhombus)

- (3) $\angle D \cong \angle B$ (Both pairs of opposite angles of a rhombus/parallelogram are congruent.)
 (4) $\triangle CDA \cong \triangle CBA$ (S.A.S.)

- Problem Set 73, Practice B – This problem statement is fundamentally incorrect and must be changed. The problem statement and diagram should be:

If $\triangle MLJ \square \triangle ONQ$, $KJ = 9$,
 $QO = 20$, and $JM = 12$, find PQ .



The answer is $PQ = 15$.

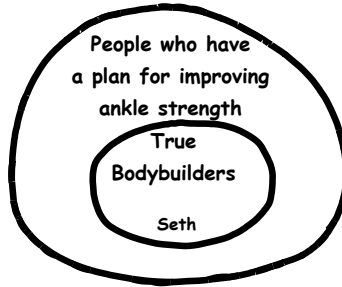
- Problem Set 74, Problem 25 – This proof can be done in just two steps (given, then prove) by using Theorem 33, which is: The diagonals of an isosceles trapezoid are congruent (equal). It should be done via the method in the answer key and on the solution.
- Problem Set 82, Problem 25 – The group instructions should state that this is Theorem 63, not Theorem 64. This proof should not be solved in 2 steps using Theorem 63.
- Lesson 84 – In this lesson we say that “The degree measure of a minor arc is the measure of its central angle.” That fact applies to the degree measure of any arc on a circle though, it is not specific only to minor arcs.
- Problem Set 98, Practice E – The given statement should be changed to “ \overline{OP} is an apothem of regular polygon $QRSTUUVWX$.”
- Problem Set 98, Problem 24 – The given statement should be changed to “ \overline{OP} is an apothem of regular polygon $ABCDEF$.”
- Problem Set 106, Problem 2 – The equation in the given statement should be “ $(x-h)^2 + (y-k)^2 = r^2$.”
- Chapter 5 Test, Problem 4 – The statement of this problem should be “A(n) _____ triangle has at least two congruent (equal) sides.”
- Chapter 10 Test, Problem 14 – The side length of 9 on the smaller triangle should be changed to 10.
- Chapter 11 Test, Problem 23 – Step five of this proof should be removed from the answer key.

- Chapter 12 Test, Problem 6 – The answer in the answer key and on the CD should be “secant line.”

Errors in copies that were purchased before 2009.

- Problem Set 7, Problem 4 – The answer in the answer key should be “straight line.”
- Problem Set 14, Problem 16 – The answer in the answer key should be “ $UW = 24.6$.”
- Problem Set 14, Problem 25 – The diagram should be changed to accurately reflect the given statement of “ $m\angle DAC = m\angle DBC$.”
- Lesson 17, Page 104 – The last sentence in the second paragraph of this lesson is, “ $\angle AOB$ and $\angle AOC$ don’t qualify as adjacent angles.” This should be changed to “ $\angle AOC$ and $\angle BOC$ don’t qualify as adjacent angles.”
- Problem Set 18, Problem 20 – The statement of this problem gives the measurement “ $KM = 5z - 10$,” but it should instead be “ $VM = 5z - 10$.”
- Problem Set 22, Problem 15 – The answer in the answer key should be “always.”
- Problem Set 22, Problem 24 – The third step in the answer key should be:
(3) $\angle 1 \cong \angle 3$, $\angle 2 \cong \angle 4$.
- Problem Set 23, Practice B – The answer in the answer key should be “If two angles are complementary to the same angle, then they are equal.”
- Problem Set 23, Problem 7 – The answer in the answer key should be “Supplementary angles; alternate interior angles.”
- Problem Set 23, Problem 12 – The answer in the answer key should be “If two angles are supplementary to the same angle, then they are congruent.”
- Lecture 24 – On the second proof of this lecture, in both the textbook and the CD, the statement for the sixth step of the proof should be “ $\angle 2$ and $\angle 3$ are supplementary.”
- Problem Set 24, Problem 22 – On the diagram for this proof, angle 2 should be on the other side of line segment VW .
- Problem Set 25, Problem 9 – The answer in the answer key should be “Transitive or Substitution Property.”

- Problem Set 28, Practice B – The answer in the answer key should be “Interior angles on the same side of the transversal; supplementary.”
- Problem Set 28, Problem 15 – The answer in the answer key should be “sometimes.”
- Problem Set 28, Problem 18 – The answer in the answer key should be “Alternate interior angles; congruent.”
- Problem Set 28, Problem 19 – The answer in the answer key should be “Interior angles on the same side of the transversal; supplementary.”
- Problem Set 29, Problem 24 – On the diagram in the textbook for this problem, angle 3 should be on the other side of line r.
- Problem Set 30, Problem 9 – The answer in the answer key should be “never.”
- Problem Set 33, Problem 23 – One of the givens for this proof is $\overline{AB} \cong \overline{BD}$, it should instead be “ $\overline{AB} \cong \overline{CD}$.” The first step of the proof should be:
 (1) $\angle BAD \cong \angle ADC$; E is the midpoint of \overline{AD} ; $\overline{AB} \cong \overline{CD}$ (Given)
- Problem Set 34, Practice E – The prove statement in the textbook, answer key and on the CD should be “ $\triangle HDF \cong \triangle PFD$ ”
- Problem Set 36, Practice D – The answer in the answer key should be “ $m\angle M = 29$, $m\angle MRE = 61$ ”
- Problem Set 36, Problem 20 – The answer in the answer key should be “ $m\angle P = 35$, $m\angle PQC = 55$ ”
- Problem Set 38, Practice B – The answer in the answer key should be “Corresponding Parts of Congruent Triangles are Congruent (C.P.C.T.C.).”
- Problem Set 40, Problem 12 – The answer in the answer key and on the CD should be “If two lines form congruent alternate interior angles with a transversal, then the lines are parallel.”
- Problem Set 40, Problem 19 – The answer in the answer key should be “ $x = 14$, $y = 19$.”
- Problem Set 42, Practice E – The seventh step in the answer key should be:
 (7) $\triangle NMO \cong \triangle KLQ$ (A.A.S.)
- Problem Set 42, Problem 21 – The answer in the answer key and on the CD should be :



- Problem Set 43, Problem 24 – The eighth and ninth steps in the answer key should be:
 - (8) $\overline{DS} \cong \overline{LS}$ (C.P.C.T.C.)
 - (9) $\triangle DSL$ is isosceles (Definition of an isosceles triangle)
- Problem Set 44, Problem 5 – The answer in the answer key should be “ $a + c > b + d$; Addition Property of Inequality.”
- Problem Set 44, Problems 10 and 11 – The group instruction for these problems in the textbook should be “Solve each inequality below. Show your steps and give a reason for each one.”
- Problem Set 46, Practice C – The answer in the answer key should be “ $y = 72$.”
- Problem Set 48, Problem 23 – The problem statement should be:

“Given: G is between H and E .
 Prove: $m\angle HGD > m\angle F$ ”

The answer in the answer key should be:

- (1) G is between H and E (Given)
 - (2) $m\angle HGD > m\angle GED$ (Exterior Angle Inequality Theorem)
 - (3) $m\angle GED > m\angle F$ (Exterior Angle Inequality Theorem)
 - (4) $m\angle HGD > m\angle F$ (Transitive)
- Problem Set 49 – On the first proof in this lesson, the given statement for the diagram and the first step of the proof should be “ $EF > DE$.”
 - Problem Set 51, Problem 23 – The prove statement in the textbook, answer key and the CD should be “ AP does not equal PC .” The answer is:
 - (1) $\triangle ABC$ is not isosceles (Given)
 - (2) Either $AP = PC$ or $AP \neq PC$. Assume $AP = PC$. (A statement is either true or false.)
 - (3) $\angle 1 \cong \angle 2$ (Given)
 - (4) $PB = PB$ (Reflexive)
 - (5) $\triangle BPA \cong \triangle BPC$ (S.A.S.)
 - (6) $AB = BC$ (C.P.C.T.C.)
 - (7) $\triangle ABC$ is isosceles (Definition of isosceles triangle)

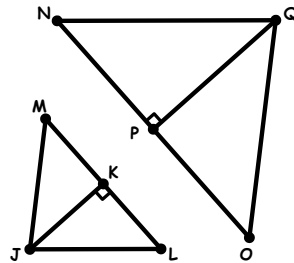
(8) $AP \neq PC$ (Statement 7 contradicts the given statement that $\triangle ABC$ is not isosceles. The assumption made in statement 2 must be false. By elimination, statement 8 must be true.

- Lesson 52, Page 329 – Reasons 4 and 5 of the proof for Theorem 35 should be as follows:
Reason 4: Consecutive pairs of angles of a parallelogram are supplementary.
Reason 5: If two angles are supplementary to the same angle, then they are congruent.
- Problem Set 52, Problem 18 – The answer in the answer key should be “ $45^\circ, 60^\circ, 75^\circ$; acute triangle.”
- Problem Set 54, Practice C – The answer in the answer key should be “If both pairs of opposite sides are a congruent, then a quadrilateral is a parallelogram.”
- Problem Set 54, Problem 16 – The answer in the answer key should be “If both pairs of opposite sides are congruent, then a quadrilateral is a parallelogram.”
- Problem Set 58, Problem 21 – The answer in the answer key should be “ $p = 23, q = 18$.”
- Problem Set 61, Problem 23 – “ LQ is not parallel to PH ” should be added to the given statements. The first step of the proof should look like this and everything else should be the same:
(1) $LQ \cong PQ, LQ$ not parallel to PH (Given)
- Problem Set 63, Problem 6 – The answer in the answer key should be “Regular pentagon; 108° .”
- Problem Set 63, Problem 7 – The answer in the answer key should be “Equilateral triangle; 60° .”
- Problem Set 64, Practice C – The answer in the answer key should be “ $y = 19$.”
- Problem Set 64, Problem 19 – The answer in the answer key should be “ $x = 60, y = 20, z = 30$.”
- Lesson 66 – On the last figure in the written lesson and the on CD lecture, Arkansas is mislabeled as Louisiana.
- Problem Set 67, Problem 6 – The answer in the answer key should be “Regular pentagon; 108° .”
- Problem Set 67, Problem 7 – The answer in the answer key should be “Regular hexagon; 120° .”

- Problem Set 67, Problem 15 – The answer in the answer key should be “ $y = \frac{m}{3}$.”
- Problem Set 68, Practice E – Steps three and four in the answer key should be:
 - (3) $\angle AKC$ and $\angle CJA$ are right angles (Perpendicular lines intersect to form right angles.)
 - (4) $\angle AKC \cong \angle CJA$ (All right angles are congruent.)
- Problem Set 73, Practice B – This problem statement is fundamentally incorrect and has been changed. The problem statement and diagram should be:

If $\triangle MLJ \square \triangle ONQ$, $KJ = 9$,
 $QO = 20$, and $JM = 12$, find PQ .

The answer is $PQ = 15$.



- Problem Set 73, Practice D – The answer in the answer key should be “8.66.”
- Problem Set 73, Problem 6 – The answer in the answer key should be “Regular octagon; 135° .”
- Problem Set 73, Problem 7 – The answer in the answer key should be “Regular decagon; 144° .”
- Problem Set 73, Problem 22 – The answer in the answer key should be “10.39.”
- Problem Set 73, Problem 23 – Step 5 in the answer key should be:
 - (5) $DA > PA$ (If Unequal Angles, then Unequal Sides)
- Problem Set 74, Practice A – The answer in the answer key should be “13.44.”
- Problem Set 74, Problem 7 – The answer in the answer key should be “7.95.”
- Problem Set 75, Problem 22 – The answer in the answer key should be “48.16.”
- Problem Set 78, Problem 23 – Step four of this proof should be:
 - (4) $\angle AKC \cong \angle CJA$ (Converse of definition of similar triangles)
- Problem Set 80, Problem 20 – The answer in the answer key should be “16.30.”
- Problem Set 81, Problem 20 – The answer in the answer key should be “ $y = 5\sqrt{7}$.”
- Problem Set 83, Practice E – The answer in the answer key should be:

“ $\overline{KL} \perp \overline{LW}$ at point L (Given). Assume \overline{LW} is not a tangent to $\square K$. That means it must intersect $\square K$ at another point, W . Since \overline{KW} is the hypotenuse of $\triangle KWL$, $KW > KL$. But if W is on the circle, KW should be a radius and equal to KL . The assumption that \overline{LW} is not a tangent must be false. Therefore, \overline{LW} has to be a tangent.”

- Problem Set 83, Problem 24 – Step three of this proof should be:
(3) $\overline{PC} \perp \overline{DC}$ (Definition of perpendicular lines)
- Problem Set 83, Practice E – Add the instruction of “Do the proof below informally and use the indirect method.”
- Problem Set 83, Problem 25 – The answer in the answer key should be:
“ $\overline{OP} \perp \overline{RP}$ at point P (Given). Assume \overline{RP} is not a tangent to $\square O$. That means it must intersect $\square O$ at another point, R . Since \overline{OR} is the hypotenuse of $\triangle OPR$, $OR > OP$. But if R is on the circle, OR should be a radius and equal to OP . The assumption that \overline{RP} is not a tangent must be false. Therefore, \overline{RP} has to be a tangent.”
- Problem Set 83, Problems 24 and 25 – Change the group instruction for these proofs to “Do each proof below. Number 25 is Theorem 65. Do an informal proof for problem 25 and use the indirect method.”
- Problem Set 84, Problem 6 – The answer in the answer key should be “Regular pentagon; 108° .”
- Problem Set 84, Problem 7 – The answer in the answer key should be “Regular decagon; 144° .”
- Problem Set 84, Problem 13 – The answer in the answer key should be “base = 18.88, legs = 16.89”
- Lesson 84, Problem 23 – Step six in the answer key should be:
(6) $\angle 1 \cong \angle 2$ (If two parallel lines are cut by a transversal, then their alternate interior angles are congruent.)
- Problem Set 91, Problem 7 – The answer in the answer key should be “75.10.”
- Problem Set 94, Problem 23 – Step five in the answer key should be:
(5) QSP is a semicircle.
- Problem Set 96, Problem 16 – The answer in the answer key should be “ $14 + 6\pi$.”

- Problem Set 101, Problem 22 – The answer in the answer key should be “30.94 in.”
- Problem Set 102, Problem 24 – Steps four and five in the answer key and on the CD should be:

(4) $m\angle RTS = \frac{1}{2}mRS$, $m\angle TSU = \frac{1}{2}mTU$ (An inscribed angle is equal in measure to one-half the measure of its intercepted arc.)

(5) $\frac{1}{2}mRS = \frac{1}{2}mTU$ (Substitution)

(6) $mRS = mTU$ (Multiplication)

The steps that were originally numbered 6 through 11 should be renumbered 7 through 12.

- Chapter 10 Test, Problem 14 – On the diagram in the textbook, the angles that have the double and triple arcs should not have any arcs at all.
- Chapter 11 Test, Problem 13 – The answer in the answer key should be “17.30.”
- Chapter 12 Test, Problem 6 – The problem statement should be “ \overline{EF} .”
- Chapter 14 Test, Problem 8 – The answer in the answer key should be “ $6\pi - 9\sqrt{3}$.”