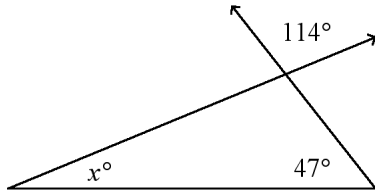


Algebra & Geometry Review Final Exam Practice Problems

Multiple Choice

Identify the choice that best completes the statement or answers the question.

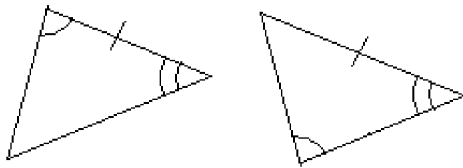
- _____ 1. Find the value of the variable. The diagram is not to scale.



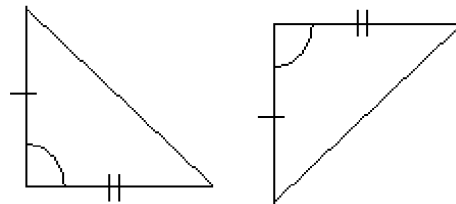
- a. 66 b. 19 c. 29 d. 43

- _____ 2. In each pair of triangles, parts are congruent as marked. Which pair of triangles is congruent by ASA?

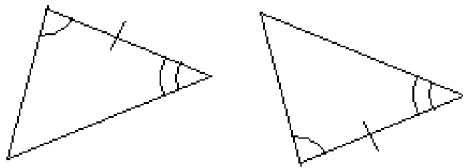
a.



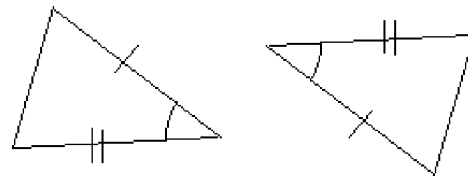
c.



b.

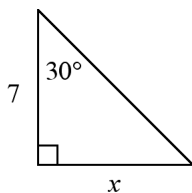


d.



Find the value of x . Round your answer to the nearest tenth.

- _____ 3.



Not drawn to scale

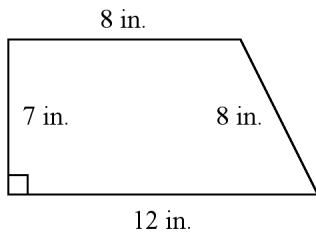
- a. 3.5 b. 12.1 c. 6.1 d. 4

Name: _____

ID: A

Find the area. The figure is not drawn to scale.

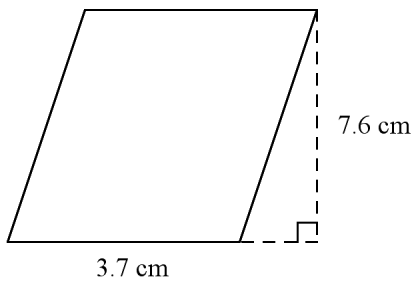
_____ 4.



Not drawn to scale

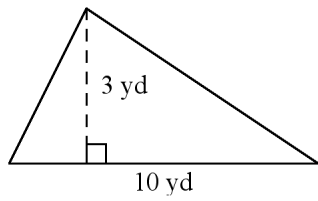
- a. 77.2 in.^2 b. 80 in.^2 c. 75 in.^2 d. 70 in.^2

_____ 5.



- a. 28.12 cm^2 b. 3.9 cm^2 c. 11.3 cm^2 d. 56.24 cm^2

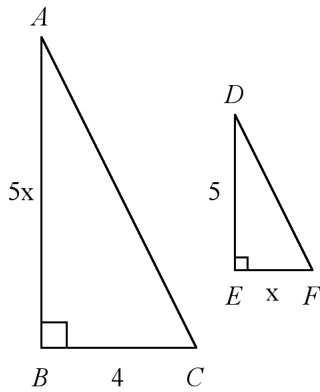
_____ 6.



- a. 30 yd^2 b. 6.5 yd^2 c. 13 yd^2 d. 15 yd^2

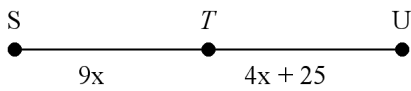
The polygons are similar, but not necessarily drawn to scale. Find the values of x and y .

- _____ 7. Triangles ABC and DEF are similar. Find the lengths of AB and EF .



- | | |
|----------------------|----------------------|
| a. $AB = 2; EF = 10$ | c. $AB = 20; EF = 4$ |
| b. $AB = 10; EF = 2$ | d. $AB = 4; EF = 20$ |

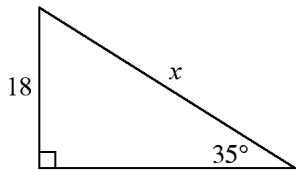
- _____ 8. If T is the midpoint of \overline{SU} , find the values of x and ST . The diagram is not to scale.



- | | |
|---------------------|----------------------|
| a. $x = 5, ST = 45$ | c. $x = 10, ST = 60$ |
| b. $x = 5, ST = 60$ | d. $x = 10, ST = 45$ |

Find the value of x . Round to the nearest tenth.

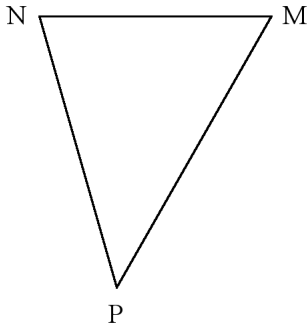
- _____ 9.



Not drawn to scale

- | | | | |
|---------|---------|---------|---------|
| a. 10.3 | b. 31.4 | c. 10.7 | d. 31.8 |
|---------|---------|---------|---------|

_____ 10. Name the angle included by the sides \overline{PN} and \overline{NM} .



- a. $\angle N$ b. $\angle P$ c. $\angle M$ d. none of these

Solve the proportion.

_____ 11. $\frac{5}{7} = \frac{m}{35}$

- a. $\frac{1}{25}$ b. 5 c. 1 d. 25

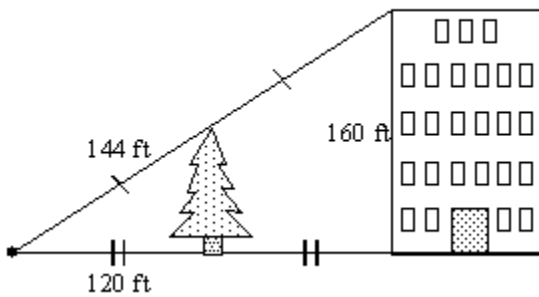
_____ 12. $\frac{6}{a} = \frac{18}{27}$

- a. 54 b. 81 c. 9 d. 18

_____ 13. $\frac{3y - 8}{12} = \frac{y}{5}$

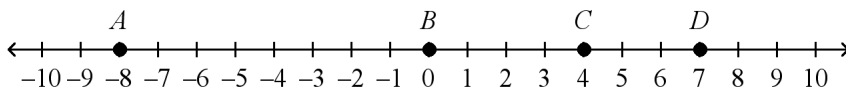
- a. -10 b. -7 c. $\frac{3}{40}$ d. $\frac{40}{3}$

_____ 14. Use the information in the diagram to determine the height of the tree to the nearest foot.



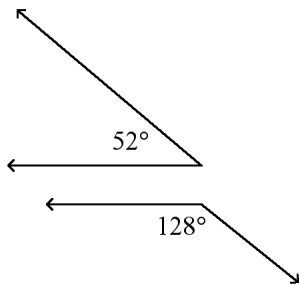
- a. 80 ft b. 264 ft c. 60 ft d. 72 ft

_____ 15. Find AC .



- a. 14 b. 15 c. 12 d. 4

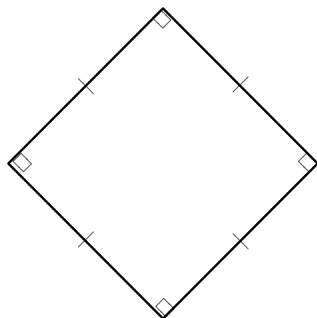
_____ 16. How are the two angles related?



Drawing not to scale

- a. vertical c. complementary
 b. supplementary d. adjacent

_____ 17. Judging by appearance, classify the figure in as many ways as possible.



- a. rectangle, square, quadrilateral, parallelogram, rhombus
 b. rectangle, square, parallelogram
 c. rhombus, trapezoid, quadrilateral, square
 d. square, rectangle, quadrilateral

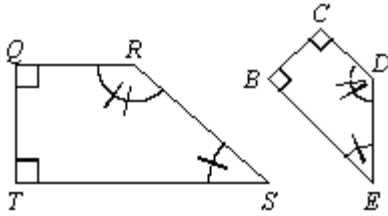
_____ 18. Complete this statement. A polygon whose sides all have the same length is said to be _____.

- a. regular b. equilateral c. equiangular d. convex

_____ 19. Classify $\triangle ABC$ by its angles, when $m\angle A = 32$, $m\angle B = 85$, and $m\angle C = 63$.

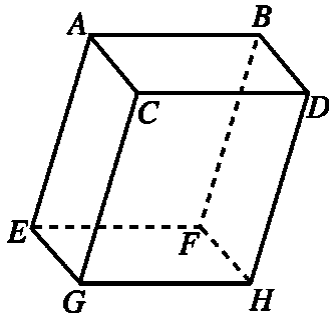
- a. right b. straight c. obtuse d. acute

____ 20. Figure $TQRS \sim BCDE$. Name a pair of corresponding sides?



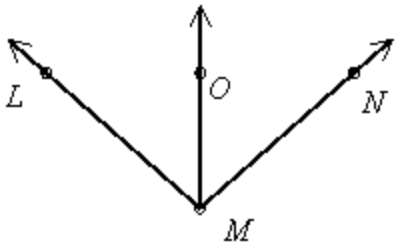
- a. \overline{TQ} and \overline{BE} b. \overline{TS} and \overline{CD} c. \overline{RS} and \overline{BC} d. \overline{QR} and \overline{CD}

____ 21. Which plane is parallel to plane $EFHG$?



- a. plane $ABDC$ b. plane $ACGE$ c. plane $CDHG$ d. plane $BDHF$

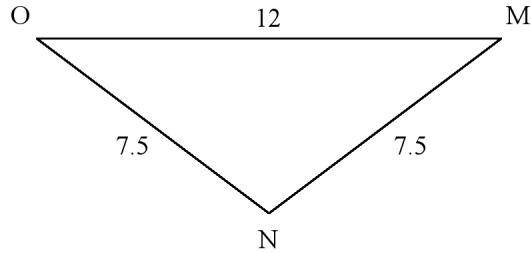
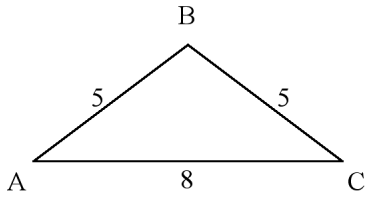
____ 22. \overrightarrow{MO} bisects $\angle LMN$, $m\angle LMO = 8x - 23$, and $m\angle NMO = 2x + 37$. Solve for x and find $m\angle LMN$. The diagram is not to scale.



- a. $x = 9, m\angle LMN = 98$ c. $x = 10, m\angle LMN = 114$
 b. $x = 9, m\angle LMN = 49$ d. $x = 10, m\angle LMN = 57$

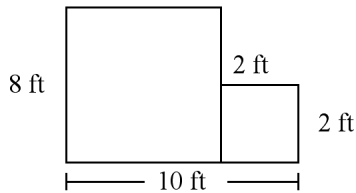
State whether the triangles are similar. If so, write a similarity statement and the postulate or theorem you used.

_____ 23.



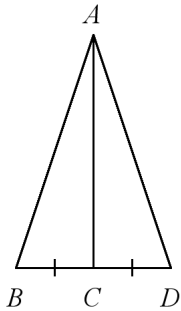
- a. $\triangle ABC \sim \triangle MNO$; SSS
- b. $\triangle ABC \sim \triangle MNO$; SAS
- c. $\triangle ABC \sim \triangle MNO$; AA
- d. The triangles are not similar.

_____ 24. The figure is formed from rectangles. Find the total area. The diagram is not to scale.



- a. 104 ft^2
- b. 36 ft^2
- c. 80 ft^2
- d. 68 ft^2

_____ 25. What other information do you need in order to prove the triangles congruent using the SAS Congruence Postulate?

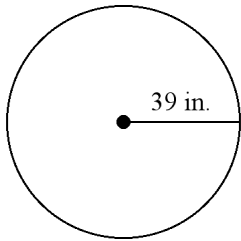


- a. $\angle BAC \cong \angle DAC$
- b. $\angle CBA \cong \angle CDA$
- c. $\overline{AC} \perp \overline{BD}$
- d. $\overline{AC} \cong \overline{BD}$

Name: _____

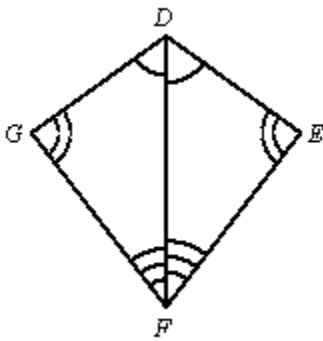
ID: A

____ 26. Find the circumference of the circle in terms of π .



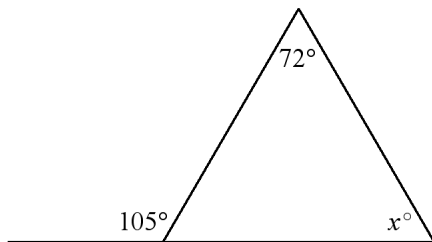
- a. 156π in. b. 39π in. c. 1521π in. d. 78π in.

____ 27. From the information in the diagram, can you prove $\triangle FDG \cong \triangle FDB$? Explain.



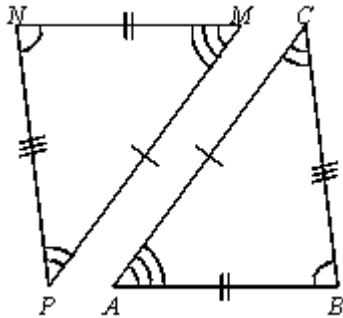
- a. yes, by ASA c. yes, by SAS
b. yes, by AAA d. no

____ 28. Find the value of x . The diagram is not to scale.



- a. 33 b. 162 c. 147 d. 75

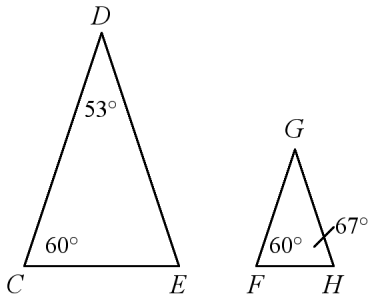
____ 29. $\angle ABC \cong ?$



- a. $\angle PMN$ b. $\angle NPM$ c. $\angle NMP$ d. $\angle MNP$

____ 30. The area of a parallelogram is 420 cm^2 and the height is 35 cm . Find the corresponding base.
 a. 385 cm b. 455 cm c. $14,700 \text{ cm}^2$ d. 12 cm

____ 31. Write a similarity statement for the triangles.

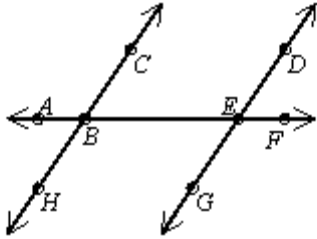


- a. $\triangle CDE \sim \triangle FGH$ c. $\triangle CDE \sim \triangle FGH$
 b. $\triangle CED \sim \triangle FGH$ d. $\triangle EDC \sim \triangle FGH$

____ 32. Supplementary angles are two angles whose measures have sum ____.
 Complementary angles are two angles whose measures have sum ____.
 a. $90; 180$ b. $90; 45$ c. $180; 360$ d. $180; 90$

____ 33. Find the angle of elevation of the sun from the ground to the top of a tree when a tree that is 10 yards tall casts a shadow 14 yards long. Round to the nearest degree.
 a. 54° b. 36° c. 46° d. 44°

_____ 34. Which statement is true?



- $\angle CBA$ and $\angle EBH$ are same-side angles.
- $\angle EBH$ and $\angle BED$ are same-side angles.
- $\angle CBA$ and $\angle HBE$ are alternate interior angles.
- $\angle EBH$ and $\angle BED$ are alternate interior angles.

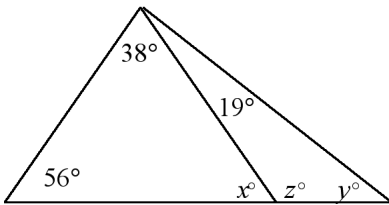
_____ 35. What is the measure of the vertex angle of an isosceles triangle if one of its base angles measures 42° ?

- 69°
- 84°
- 138°
- 96°

_____ 36. If the perimeter of a square is 72 inches, what is its area?

- 72 in.^2
- 324 in.^2
- 18 in.^2
- $5,184 \text{ in.}^2$

_____ 37. Find the values of x , y , and z . The diagram is not to scale.



- $x = 86, y = 94, z = 67$
- $x = 67, y = 86, z = 94$
- $x = 67, y = 94, z = 86$
- $x = 86, y = 67, z = 94$

_____ 38. If $\frac{a}{b} = \frac{5}{3}$, then $3a =$ _____.

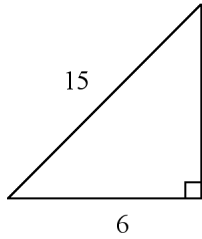
- $3b$
- $10b$
- $5b$
- $6b$

Name: _____

ID: A

Find the length of the missing side. Leave your answer in simplest radical form.

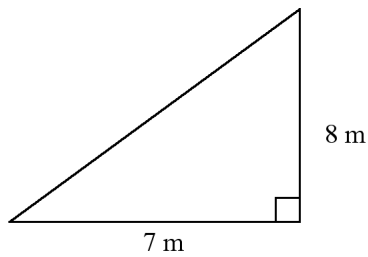
_____ 39.



Not drawn to scale

- a. $3\sqrt{29}$ cm b. $3\sqrt{21}$ cm c. $\sqrt{21}$ cm d. 3 cm

_____ 40.

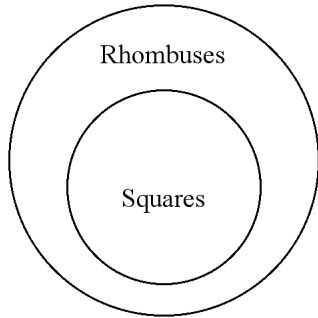


Not drawn to scale

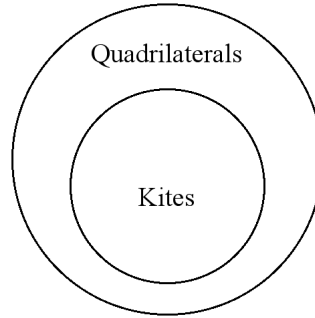
- a. $\sqrt{17}$ m b. 113 m c. $\sqrt{113}$ m d. $\sqrt{71}$ m

____ 41. Which Venn diagram is NOT correct?

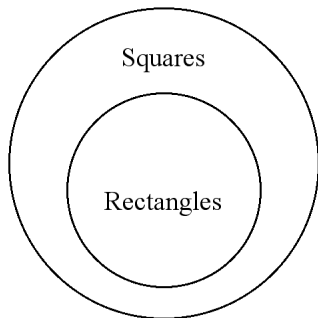
a.



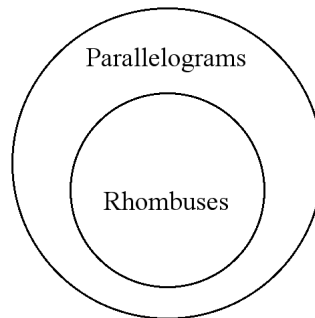
c.



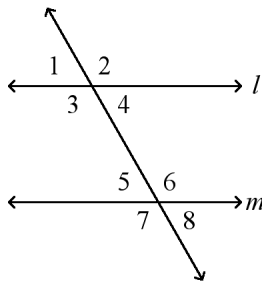
b.



d.



____ 42. Find the value of the variable if $m \parallel l$, $m\angle 1 = 2x + 44$ and $m\angle 5 = 5x + 38$. The diagram is not to scale.



a. 1

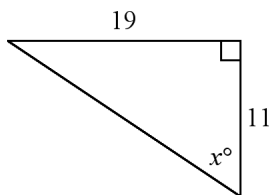
b. 2

c. 3

d. -2

Find the value of x to the nearest degree.

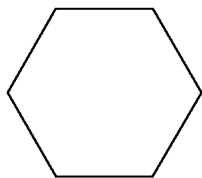
_____ 43.



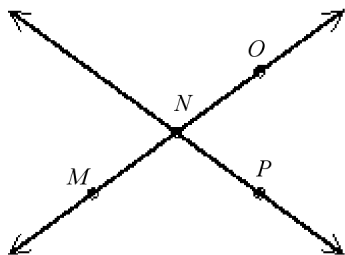
Not drawn to scale

- a. 30 b. 60 c. 70 d. 85

_____ 44. Classify the polygon by its sides.



- a. triangle b. hexagon c. pentagon d. octagon

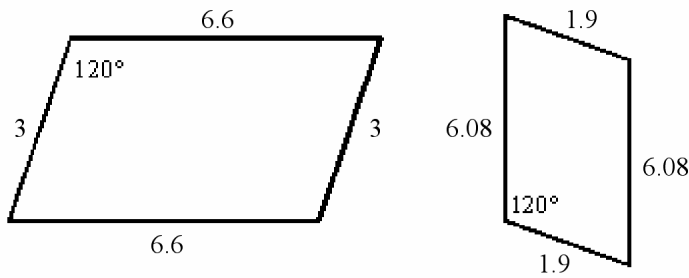
_____ 45. Are O , N , and P collinear? If so, name the line on which they lie.

- a. No, the three points are not collinear.
b. Yes, they lie on the line MP .
c. Yes, they lie on the line NP .
d. Yes, they lie on the line MO .

_____ 46. A model is made of a car. The car is 9 feet long and the model is 6 inches long. What is the ratio of the length of the car to the length of the model?

- a. 18 : 1 b. 1 : 18 c. 9 : 6 d. 6 : 9

____ 47. Determine whether the figures are similar.



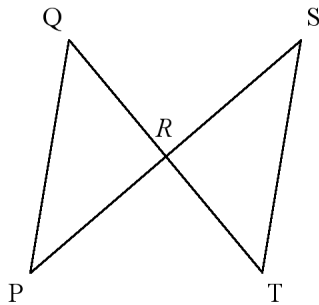
Not drawn to scale

- a. similar
- b. not similar
- c. not enough information

____ 48. Supply the missing reasons to complete the proof.

Given: $\angle Q \cong \angle T$ and $\overline{QR} \cong \overline{TR}$

Prove: $\overline{PR} \cong \overline{SR}$



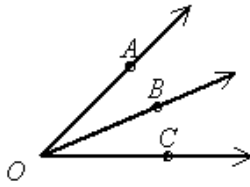
Statement	Reasons
1. $\angle Q \cong \angle T$ and $\overline{QR} \cong \overline{TR}$	1. Given
2. $\angle PRQ \cong \angle SRT$	2. Vertical angles are congruent.
3. $\triangle PRQ \cong \triangle SRT$	3. _____ ? _____
4. $\overline{PR} \cong \overline{SR}$	4. _____ ? _____

- a. ASA; Substitution
- b. SAS; CPCTC
- c. AAS; CPCTC
- d. ASA; CPCTC

Name: _____

ID: A

____ 49. If $m\angle BOC = 27$ and $m\angle AOC = 47$, then what is the measure of $\angle AOB$? The diagram is not to scale.



a. 74

b. 40

c. 20

d. 54

Algebra & Geometry Review Final Exam Practice Problems Answer Section

MULTIPLE CHOICE

1. ANS: B PTS: 1 DIF: L3
REF: 3-4 Parallel Lines and the Triangle Angle-Sum Theorem
OBJ: 3-4.1 Finding Angle Measures in Triangles
NAT: NAEP 2005 G3b | NAEP 2005 G3f | ADP J.5.1 | ADP K.1.2
STA: MA G.G.1 | MA G.G.2b | MA G.G.5 | MA G.G.6 | MA G.G.7
KEY: triangle | sum of angles of a triangle | vertical angles
2. ANS: B PTS: 1 DIF: L2
REF: 4-3 Triangle Congruence by ASA and AAS
OBJ: 4-3.1 Using the ASA Postulate and the AAS Theorem NAT: NAEP 2005 G2e | ADP K.3
STA: MA G.G.2 | MA G.G.2b | MA G.G.6 | MA G.G.17 TOP: 4-3 Example 1
KEY: ASA
3. ANS: D PTS: 1 DIF: L2 REF: 8-3 The Tangent Ratio
OBJ: 8-3.1 Using Tangents in Triangles
NAT: NAEP 2005 M1m | ADP I.1.2 | ADP I.4.1 | ADP K.11.1 | ADP K.11.2
STA: MA G.G.6 | MA G.G.9 TOP: 8-3 Example 2
KEY: side length using tangent | tangent | tangent ratio
4. ANS: D PTS: 1 DIF: L2
REF: 10-2 Areas of Trapezoids, Rhombuses, and Kites OBJ: 10-2.1 Area of a Trapezoid
NAT: NAEP 2005 M1h | ADP J.1.6 | ADP K.8.2
STA: MA G.G.1 | MA G.G.1a | MA G.G.7 | MA G.M.1 TOP: 10-2 Example 1
KEY: trapezoid | area
5. ANS: A PTS: 1 DIF: L2
REF: 10-1 Areas of Parallelograms and Triangles OBJ: 10-1.1 Area of a Parallelogram
NAT: NAEP 2005 M1h | ADP J.1.6 | ADP K.8.2 STA: MA G.G.1b | MA G.G.15
TOP: 10-1 Example 1 KEY: area | parallelogram | base | height
6. ANS: D PTS: 1 DIF: L2
REF: 10-1 Areas of Parallelograms and Triangles OBJ: 10-1.2 Area of a Triangle
NAT: NAEP 2005 M1h | ADP J.1.6 | ADP K.8.2
STA: MA G.G.1 | MA G.G.1a | MA G.M.1 TOP: 10-1 Example 3
KEY: triangle | area
7. ANS: B PTS: 1 DIF: L2 REF: 7-2 Similar Polygons
OBJ: 7-2.1 Similar Polygons
NAT: NAEP 2005 G2e | NAEP 2005 M1k | ADP I.1.2 | ADP J.5.1 | ADP K.7
STA: MA G.G.2b | MA G.G.5 TOP: 7-2 Example 3
KEY: corresponding sides | proportion | similar polygons
8. ANS: A PTS: 1 DIF: L2 REF: 1-5 Measuring Segments
OBJ: 1-5.1 Finding Segment Lengths NAT: NAEP 2005 M1e | NAEP 2005 M1f | ADP I.2.1
STA: MA G.G.1b | MA G.G.12 TOP: 1-5 Example 3
KEY: segment | segment length | midpoint | multi-part question

9. ANS: B PTS: 1 DIF: L2 REF: 8-4 Sine and Cosine Ratios
 OBJ: 8-4.1 Using Sine and Cosine in Triangles
 NAT: NAEP 2005 M1m | ADP I.1.2 | ADP I.4.1 | ADP K.11.1 | ADP K.11.2
 STA: MA G.G.6 | MA G.G.9 TOP: 8-4 Example 2
 KEY: sine | side length using sine and cosine | sine ratio
10. ANS: A PTS: 1 DIF: L2
 REF: 4-2 Triangle Congruence by SSS and SAS
 OBJ: 4-2.1 Using the SSS and SAS Postulates NAT: NAEP 2005 G2e | ADP K.3
 STA: MA G.G.2 | MA G.G.2b | MA G.G.6 | MA G.G.17 TOP: 4-2 Example 2
 KEY: angle
11. ANS: D PTS: 1 DIF: L2 REF: 7-1 Ratios and Proportions
 OBJ: 7-1.1 Using Ratios and Proportions
 NAT: NAEP 2005 NAEP 2005 N4c | ADP I.1.2 | ADP J.5.1 | ADP K.7
 STA: MA G.G.2b | MA G.M.5 TOP: 7-1 Example 3
 KEY: proportion | Cross-Product Property
12. ANS: C PTS: 1 DIF: L2 REF: 7-1 Ratios and Proportions
 OBJ: 7-1.1 Using Ratios and Proportions
 NAT: NAEP 2005 NAEP 2005 N4c | ADP I.1.2 | ADP J.5.1 | ADP K.7
 STA: MA G.G.2b | MA G.M.5 TOP: 7-1 Example 3
 KEY: proportion | Cross-Product Property
13. ANS: D PTS: 1 DIF: L3 REF: 7-1 Ratios and Proportions
 OBJ: 7-1.1 Using Ratios and Proportions
 NAT: NAEP 2005 NAEP 2005 N4c | ADP I.1.2 | ADP J.5.1 | ADP K.7
 STA: MA G.G.2b | MA G.M.5 TOP: 7-1 Example 3
 KEY: proportion | Cross-Product Property
14. ANS: A PTS: 1 DIF: L2 REF: 7-3 Proving Triangles Similar
 OBJ: 7-3.2 Applying AA, SAS, and SSS Similarity
 NAT: NAEP 2005 G2e | ADP I.1.2 | ADP K.3
 STA: MA G.G.2 | MA G.G.2b | MA G.G.5 TOP: 7-3 Example 4
 KEY: Angle-Angle Similarity Postulate | word problem
15. ANS: C PTS: 1 DIF: L2 REF: 1-5 Measuring Segments
 OBJ: 1-5.1 Finding Segment Lengths NAT: NAEP 2005 M1e | NAEP 2005 M1f | ADP I.2.1
 STA: MA G.G.1b | MA G.G.16 TOP: 1-5 Example 1
 KEY: segment | segment length
16. ANS: B PTS: 1 DIF: L2 REF: 1-6 Measuring Angles
 OBJ: 1-6.2 Identifying Angle Pairs NAT: NAEP 2005 M1e | NAEP 2005 M1f | NAEP 2005 G3g
 STA: MA G.G.6 TOP: 1-6 Example 4 KEY: supplementary angles
17. ANS: A PTS: 1 DIF: L2 REF: 6-1 Classifying Quadrilaterals
 OBJ: 6-1.1 Classifying Special Quadrilaterals NAT: NAEP 2005 G3f
 STA: MA G.G.2 | MA G.G.2b | MA G.G.10 TOP: 6-1 Example 1
 KEY: special quadrilaterals | quadrilateral | parallelogram | rhombus | square | rectangle | kite | trapezoid
18. ANS: B PTS: 1 DIF: L2
 REF: 3-5 The Polygon Angle-Sum Theorems OBJ: 3-5.2 Polygon Angle Sums
 NAT: NAEP 2005 G3b | NAEP 2005 G3f | ADP J.5.1 | ADP K.1.2
 STA: MA G.G.1 | MA G.G.1a | MA G.G.2b | MA G.G.6 | MA G.G.7
 KEY: polygon | classifying polygons | equilateral

19. ANS: D PTS: 1 DIF: L2
REF: 3-4 Parallel Lines and the Triangle Angle-Sum Theorem
OBJ: 3-4.1 Finding Angle Measures in Triangles
NAT: NAEP 2005 G3b | NAEP 2005 G3f | ADP J.5.1 | ADP K.1.2
STA: MA G.G.1 | MA G.G.2b | MA G.G.5 | MA G.G.6 | MA G.G.7
TOP: 3-4 Example 2
KEY: triangle | classifying triangles | right triangle | obtuse triangle | acute triangle
20. ANS: D PTS: 1 DIF: L2 REF: 7-2 Similar Polygons
OBJ: 7-2.1 Similar Polygons
NAT: NAEP 2005 G2e | NAEP 2005 M1k | ADP I.1.2 | ADP J.5.1 | ADP K.7
STA: MA G.G.2b | MA G.G.5 TOP: 7-2 Example 1
KEY: similar polygons | corresponding sides
21. ANS: A PTS: 1 DIF: L2
REF: 1-4 Segments, Rays, Parallel Lines and Planes OBJ: 1-4.2 Recognizing Parallel Figures
NAT: NAEP 2005 G3g STA: MA G.G.1b | MA G.G.16
TOP: 1-4 Example 3 KEY: parallel planes
22. ANS: C PTS: 1 DIF: L2 REF: 1-7 Basic Constructions
OBJ: 1-7.2 Constructing Bisectors NAT: NAEP 2005 G3b | ADP K.2.2 | ADP K.2.3
STA: MA G.G.6 TOP: 1-7 Example 4 KEY: angle bisector
23. ANS: A PTS: 1 DIF: L2 REF: 7-3 Proving Triangles Similar
OBJ: 7-3.1 The AA Postulate and the SAS and SSS Theorems
NAT: NAEP 2005 G2e | ADP I.1.2 | ADP K.3
STA: MA G.G.2 | MA G.G.2b | MA G.G.5 TOP: 7-3 Example 2
KEY: Side-Side-Side Similarity Theorem
24. ANS: D PTS: 1 DIF: L2
REF: 1-9 Perimeter, Circumference, and Area OBJ: 1-9.2 Finding Area
NAT: NAEP 2005 M1c | NAEP 2005 M1h | ADP I.4.1 | ADP J.1.6 | ADP K.8.1 | ADP K.8.2
STA: MA G.G.1 | MA G.G.12 | MA G.M.1 TOP: 1-9 Example 6
KEY: area | rectangle
25. ANS: C PTS: 1 DIF: L2
REF: 4-2 Triangle Congruence by SSS and SAS
OBJ: 4-2.1 Using the SSS and SAS Postulates NAT: NAEP 2005 G2e | ADP K.3
STA: MA G.G.2 | MA G.G.2b | MA G.G.6 | MA G.G.17 TOP: 4-2 Example 2
KEY: SAS | reasoning
26. ANS: D PTS: 1 DIF: L2
REF: 1-9 Perimeter, Circumference, and Area
OBJ: 1-9.1 Finding Perimeter and Circumference
NAT: NAEP 2005 M1c | NAEP 2005 M1h | ADP I.4.1 | ADP J.1.6 | ADP K.8.1 | ADP K.8.2
STA: MA G.G.1 | MA G.G.12 | MA G.M.1 TOP: 1-9 Example 2
KEY: circle | circumference
27. ANS: A PTS: 1 DIF: L2
REF: 4-3 Triangle Congruence by ASA and AAS
OBJ: 4-3.1 Using the ASA Postulate and the AAS Theorem NAT: NAEP 2005 G2e | ADP K.3
STA: MA G.G.2 | MA G.G.2b | MA G.G.6 TOP: 4-3 Example 3
KEY: ASA | reasoning

28. ANS: A PTS: 1 DIF: L2
REF: 3-4 Parallel Lines and the Triangle Angle-Sum Theorem
OBJ: 3-4.2 Using Exterior Angles of Triangles
NAT: NAEP 2005 G3b | NAEP 2005 G3f | ADP J.5.1 | ADP K.1.2
STA: MA G.G.1 | MA G.G.2b | MA G.G.5 | MA G.G.6 | MA G.G.7
TOP: 3-4 Example 3 KEY: triangle | sum of angles of a triangle
29. ANS: D PTS: 1 DIF: L2 REF: 4-1 Congruent Figures
OBJ: 4-1.1 Congruent Figures NAT: NAEP 2005 G2e | ADP K.3
STA: MA G.G.2 | MA G.G.2b | MA G.G.5 | MA G.G.6 TOP: 4-1 Example 1
KEY: congruent figures | corresponding parts
30. ANS: D PTS: 1 DIF: L3
REF: 10-1 Areas of Parallelograms and Triangles OBJ: 10-1.1 Area of a Parallelogram
NAT: NAEP 2005 M1h | ADP J.1.6 | ADP K.8.2
STA: MA G.G.1 | MA G.G.1a | MA G.G.7 | MA G.M.1 TOP: 10-1 Example 1
KEY: area | base | height | parallelogram
31. ANS: C PTS: 1 DIF: L2 REF: 7-3 Proving Triangles Similar
OBJ: 7-3.1 The AA Postulate and the SAS and SSS Theorems
NAT: NAEP 2005 G2e | ADP I.1.2 | ADP K.3 STA: MA G.G.2b | MA G.G.5
TOP: 7-3 Example 1 KEY: Angle-Angle Similarity Postulate
32. ANS: D PTS: 1 DIF: L2 REF: 1-6 Measuring Angles
OBJ: 1-6.2 Identifying Angle Pairs NAT: NAEP 2005 M1e | NAEP 2005 M1f | NAEP 2005 G3g
STA: MA G.G.6 TOP: 1-6 Example 4
KEY: supplementary angles | complementary angles
33. ANS: B PTS: 1 DIF: L3
REF: 8-5 Angles of Elevation and Depression
OBJ: 8-5.1 Using Angles of Elevation and Depression
NAT: NAEP 2005 M1k | ADP I.1.2 | ADP I.4.1 | ADP K.11.2
STA: MA G.G.6 | MA G.G.9
KEY: angle measure using tangent | word problem | angles of elevation and depression | problem solving | inverse of tangent | tangent ratio
34. ANS: D PTS: 1 DIF: L2 REF: 3-1 Properties of Parallel Lines
OBJ: 3-1.1 Identifying Angles NAT: NAEP 2005 M1f | ADP K.2.1
STA: MA G.G.2 | MA G.G.2b TOP: 3-1 Example 1
KEY: same-side interior angles | alternate interior angles
35. ANS: D PTS: 1 DIF: L2
REF: 4-5 Isosceles and Equilateral Triangles
OBJ: 4-5.1 The Isosceles Triangle Theorems
NAT: NAEP 2005 G3f | ADP J.5.1 | ADP K.3
STA: MA G.G.1 | MA G.G.1a | MA G.G.2 | MA G.G.2b | MA G.G.5 | MA G.G.6 | MA G.G.7 | MA G.G.8
TOP: 4-5 Example 2
KEY: isosceles triangle | Isosceles Triangle Theorem | Triangle Angle-Sum Theorem | word problem
36. ANS: B PTS: 1 DIF: L3
REF: 1-9 Perimeter, Circumference, and Area OBJ: 1-9.2 Finding Area
NAT: NAEP 2005 M1c | NAEP 2005 M1h | ADP I.4.1 | ADP J.1.6 | ADP K.8.1 | ADP K.8.2
STA: MA G.G.1 | MA G.G.12 | MA G.M.1 KEY: area | square

37. ANS: D PTS: 1 DIF: L2
REF: 3-4 Parallel Lines and the Triangle Angle-Sum Theorem
OBJ: 3-4.1 Finding Angle Measures in Triangles
NAT: NAEP 2005 G3b | NAEP 2005 G3f | ADP J.5.1 | ADP K.1.2
STA: MA G.G.1 | MA G.G.2b | MA G.G.5 | MA G.G.6 | MA G.G.7
TOP: 3-4 Example 1 KEY: triangle | sum of angles of a triangle
38. ANS: C PTS: 1 DIF: L2 REF: 7-1 Ratios and Proportions
OBJ: 7-1.1 Using Ratios and Proportions
NAT: NAEP 2005 NAEP 2005 N4c | ADP I.1.2 | ADP J.5.1 | ADP K.7
STA: MA G.G.2b | MA G.M.5 TOP: 7-1 Example 2
KEY: proportion | Cross-Product Property
39. ANS: B PTS: 1 DIF: L2
REF: 8-1 The Pythagorean Theorem and Its Converse OBJ: 8-1.1 The Pythagorean Theorem
NAT: NAEP 2005 G3d | ADP I.4.1 | ADP J.1.6 | ADP K.1.2 | ADP K.5 | ADP K.10.3
STA: MA G.G.1 | MA G.G.1a | MA G.G.2b | MA G.G.7 | MA G.G.10
TOP: 8-1 Example 2 KEY: Pythagorean Theorem | leg | hypotenuse
40. ANS: C PTS: 1 DIF: L2
REF: 8-1 The Pythagorean Theorem and Its Converse OBJ: 8-1.1 The Pythagorean Theorem
NAT: NAEP 2005 G3d | ADP I.4.1 | ADP J.1.6 | ADP K.1.2 | ADP K.5 | ADP K.10.3
STA: MA G.G.1 | MA G.G.1a | MA G.G.2b | MA G.G.7 | MA G.G.10
TOP: 8-1 Example 2 KEY: Pythagorean Theorem | leg | hypotenuse
41. ANS: B PTS: 1 DIF: L2 REF: 6-1 Classifying Quadrilaterals
OBJ: 6-1.1 Classifying Special Quadrilaterals NAT: NAEP 2005 G3f
STA: MA G.G.1 | MA G.G.1a | MA G.G.2b | MA G.G.5 | MA G.G.6 | MA G.G.11 | MA G.G.11a | MA G.G.12
KEY: reasoning | quadrilateral | Venn Diagram
NOT: TC 12, MC, Static.
42. ANS: B PTS: 1 DIF: L2 REF: 3-1 Properties of Parallel Lines
OBJ: 3-1.2 Properties of Parallel Lines NAT: NAEP 2005 M1f | ADP K.2.1
STA: MA G.G.2 | MA G.G.2b TOP: 3-1 Example 5
KEY: corresponding angles | parallel lines |
43. ANS: B PTS: 1 DIF: L2 REF: 8-3 The Tangent Ratio
OBJ: 8-3.1 Using Tangents in Triangles
NAT: NAEP 2005 M1m | ADP I.1.2 | ADP I.4.1 | ADP K.11.1 | ADP K.11.2
STA: MA G.G.6 | MA G.G.9 TOP: 8-3 Example 3
KEY: inverse of tangent | tangent | tangent ratio | angle measure using tangent
44. ANS: B PTS: 1 DIF: L2
REF: 3-5 The Polygon Angle-Sum Theorems OBJ: 3-5.1 Classifying Polygons
NAT: NAEP 2005 G3b | NAEP 2005 G3f | ADP J.5.1 | ADP K.1.2
STA: MA G.G.1 | MA G.G.1a | MA G.G.2b | MA G.G.6 | MA G.G.7
TOP: 3-5 Example 2 KEY: classifying polygons
45. ANS: A PTS: 1 DIF: L2 REF: 1-3 Points, Lines, and Planes
OBJ: 1-3.1 Basic Terms of Geometry NAT: NAEP 2005 G1c | ADP K.1.1
STA: MA G.G.2b TOP: 1-4 Example 1 KEY: point | line | collinear points

46. ANS: A PTS: 1 DIF: L2 REF: 7-1 Ratios and Proportions
 OBJ: 7-1.1 Using Ratios and Proportions
 NAT: NAEP 2005 NAEP 2005 N4c | ADP I.1.2 | ADP J.5.1 | ADP K.7
 STA: MA G.G.1 | MA G.G.1a | MA G.G.1b | MA G.G.2 | MA G.G.2b | MA G.G.3 | MA G.G.6 | MA G.G.11
 | MA G.G.11a | MA G.G.12 TOP: 7-1 Example 1
 KEY: ratio | word problem
47. ANS: B PTS: 1 DIF: L2 REF: 7-2 Similar Polygons
 OBJ: 7-2.1 Similar Polygons
 NAT: NAEP 2005 G2e | NAEP 2005 M1k | ADP I.1.2 | ADP J.5.1 | ADP K.7
 STA: MA G.G.2b | MA G.G.5 TOP: 7-2 Example 2
 KEY: similar polygons
48. ANS: D PTS: 1 DIF: L2
 REF: 4-4 Using Congruent Triangles: CPCTC
 OBJ: 4-4.1 Proving Parts of Triangles Congruent NAT: NAEP 2005 G2e | ADP K.3
 STA: MA G.G.2 | MA G.G.2b | MA G.G.6 TOP: 4-4 Example 1
 KEY: ASA | CPCTC | proof
49. ANS: C PTS: 1 DIF: L2 REF: 1-6 Measuring Angles
 OBJ: 1-6.1 Finding Angle Measures NAT: NAEP 2005 M1e | NAEP 2005 M1f | NAEP 2005 G3g
 STA: MA G.G.6 TOP: 1-6 Example 3 KEY: Angle Addition Postulate