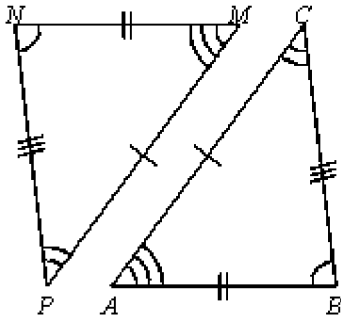


2011-2012 First Semester Exam review for computer Geometry cP

Multiple Choice

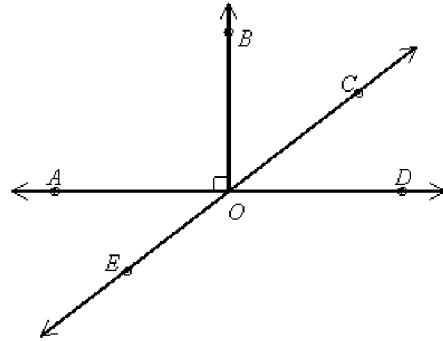
Identify the choice that best completes the statement or answers the question.

1. $\angle ACB \cong$?



- a. $\angle PMN$ b. $\angle PNM$ c. $\angle MPN$
d. $\angle NMP$

2. Name an angle complementary to $\angle DOC$.



- a. $\angle BOC$ b. $\angle DOE$ c. $\angle AOE$ d. $\angle COA$

3. Name the Property of Congruence that justifies this statement:

If $\angle D \cong \angle E$ and $\angle E \cong \angle F$, then $\angle D \cong \angle F$.

- a. Reflexive Property b. Transitive Property c. Symmetric Property d. none of these

4. What is a counterexample for the conjecture?

Conjecture: Any number that is divisible by 5 is also divisible by 10.

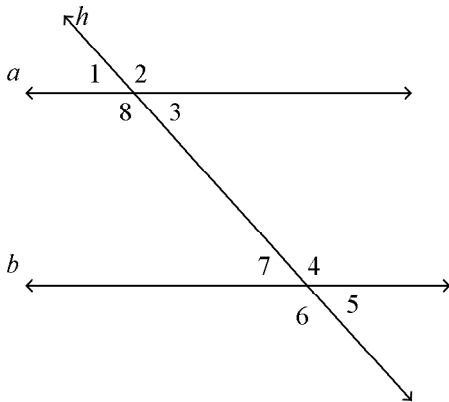
- a. 40 b. 50 c. 25 d. 32

5. If $EF = 7x + 20$, $FG = 33$, and $EG = 186$, find the value of x . The drawing is not to scale.



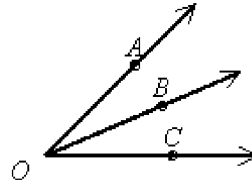
- a. $x = 19$ b. $x = 80$ c. $x = 21$ d. $x = 133$

Use the diagram to find the following.



6. What are three pairs of corresponding angles?
 a. angles 1 & 7, 2 & 4, and 6 & 7 b. angles 3 & 4, 7 & 8, and 1 & 6
 c. angles 1 & 7, 8 & 6, and 2 & 4 d. angles 1 & 2, 3 & 8, and 4 & 7
7. Identify a pair of alternate exterior angles.
 a. $\angle 1$ and $\angle 8$ b. $\angle 2$ and $\angle 5$ c. $\angle 1$ and $\angle 5$
 d. $\angle 8$ and $\angle 4$

8. If $m\angle AOC = 43^\circ$, $m\angle BOC = 2x + 10$, and $m\angle AOB = 4x - 15$, find the degree measure of $\angle BOC$ and $\angle AOB$. The diagram is not to scale.



- a. $m\angle BOC = 17^\circ$; $m\angle AOB = 26^\circ$
 b. $m\angle BOC = 26^\circ$; $m\angle AOB = 17^\circ$
 c. $m\angle BOC = 16^\circ$; $m\angle AOB = 27^\circ$
 d. $m\angle BOC = 27^\circ$; $m\angle AOB = 16^\circ$
9. Which choice shows a true conditional, with the hypothesis and conclusion identified correctly?
 a. Tomorrow is Thursday if today is Wednesday.
 Hypothesis: Today is Wednesday.
 Conclusion: Tomorrow is Thursday.
 b. If today is Wednesday, then tomorrow is Thursday.
 Hypothesis: Tomorrow is Thursday.
 Conclusion: Today is Wednesday.
 c. If today is Wednesday, then tomorrow is Thursday.
 Hypothesis: Tomorrow is Thursday.
 Conclusion: Today is not Wednesday.
 d. Tomorrow is Friday if today is Wednesday.
 Hypothesis: Today is Wednesday.
 Conclusion: Tomorrow is Friday.
10. If $\triangle STU \cong \triangle KLM$, which of the following can you NOT conclude as being true?
 a. $\angle S \cong \angle K$ b. $\overline{TU} \cong \overline{LM}$ c. $\overline{ST} \cong \overline{KM}$
 d. $\angle T \cong \angle L$

Use the given property to complete the statement.

11. Substitution Property of Equality

If $y = -3$ and $7x + y = 11$, then _____.

- a. $7(-3) + y = 11$ b. $7x + 3 = 11$
c. $-3 + y = 11$ d. $7x - 3 = 11$

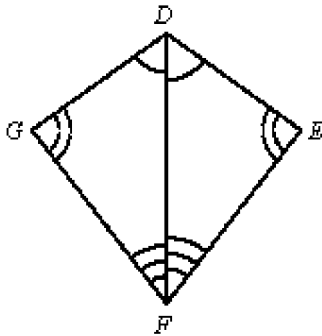
12. Multiplication Property of Equality

If $6x \div 4 = 8$, then _____.

- a. $6x = 32$ b. $6x \cdot 4 = 32$ c. $8 = 6x \div 4$
d. $8 = 6x \cdot 4$

13. Complete the statement.

The drawing is not to scale.



If $m\angle EDF = 88^\circ$, then $m\angle GDF = ?$.

- a. 44° b. 88° c. 46° d. none of these

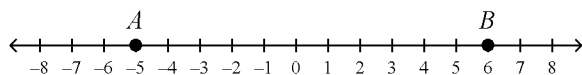
17. Use the Law of Detachment to draw a conclusion from the two given statements.

If two angles are congruent, then they have equal measures.

$\angle Y$ and $\angle Z$ are congruent.

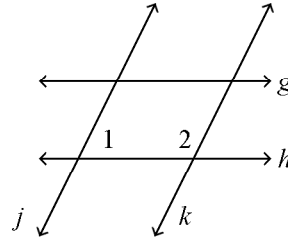
- a. $\angle Y$ is the complement of $\angle Z$. b. $m\angle Y \neq m\angle Z$ c. $m\angle Y = m\angle Z$ d. $m\angle Y + m\angle Z = 90$

18. Which point is the midpoint of \overline{AE} ?



- a. 0.5 b. -1 c. 2.5 d. 1.5

14. Which lines are parallel if $m\angle 1 + m\angle 2 = 180^\circ$? Justify your answer.



- a. $j \parallel k$, by the Converse of the Same-Side Interior Angles Theorem b. $g \parallel h$, by the Converse of the Alternate Interior Angles Theorem c. $g \parallel h$, by the Converse of the Same-Side Interior Angles Theorem d. $j \parallel k$, by the Converse of the Alternate Interior Angles Theorem

15. What is the sum of the angle measures of a 40-gon?

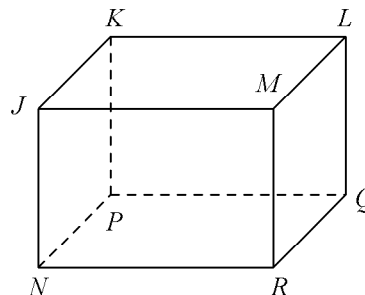
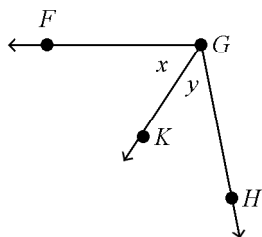
- a. 7020 b. 6840 c. 7560 d. 7200

16. Name the Property of Congruence that justifies the statement:

If $\overline{XY} \cong \overline{WX}$, then $\overline{WX} \cong \overline{XY}$.

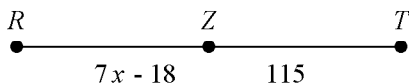
- a. Reflexive Property b. Transitive Property
c. Symmetric Property d. none of these

In the figure, \overrightarrow{GK} bisects $\angle FGH$.



19. If $m\angle FGK = 3v - 1$ and $m\angle KGH = 2v + 5$, find x .
 a. 17 b. 6 c. 34 d. 18

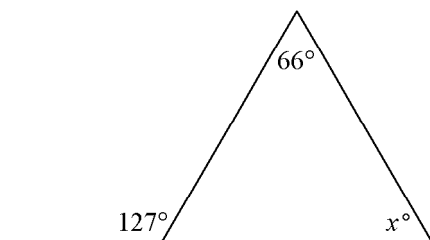
20. If Z is the midpoint of \overline{RT} , what are x , RZ , and RT ?



- a. $x = 19$, $RZ = 230$, and $RT = 115$ b. $x = 17$, $RZ = 101$, and $RT = 202$ c. $x = 19$, $RZ = 115$, and $RT = 230$ d. $x = 21$, $RZ = 115$, and $RT = 230$
23. Use the Law of Syllogism to draw a conclusion from the two given statements.
 If three points lie on the same line, then they are collinear.
 If three points are collinear, then they lie in the same plane.
 a. The three points are collinear.
 b. If three points do not lie in the same plane, then they do not lie on the same line.
 c. The three points lie in the same plane. d. If three points lie in the same line, then they lie in the same plane.

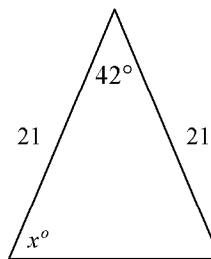
21. What four segments are parallel to plane $MRQL$?
 a. segments NP , KP , PQ , and JN b. segments JM , KL , NR , and PQ c. segments JK , JN , NP , and KP d. segments JK , KL , JM , and ML
22. What is the measure of one angle in a regular 18-gon?
 a. 200 b. 160 c. 80 d. 2880

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



- a. 61 b. 53 c. 156 d. 119

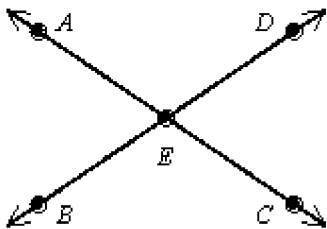
25. What is the value of x ?



Drawing not to scale

- a. 148° b. 69° c. 74° d. 138°

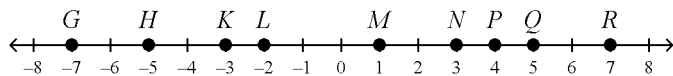
26. In the figure shown, $m\angle AED = 112$. Which of the following statements is false?



Not drawn to scale

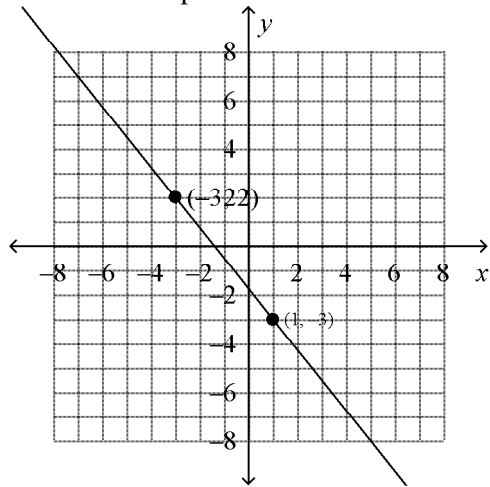
- a. $m\angle AEB = 68$ b. $m\angle BEC = 112$
 c. $\angle AEB$ and $\angle BEC$ are adjacent angles.
 d. $\angle DEC$ and $\angle AEB$ are adjacent angles.

Use the number line to find the measure.



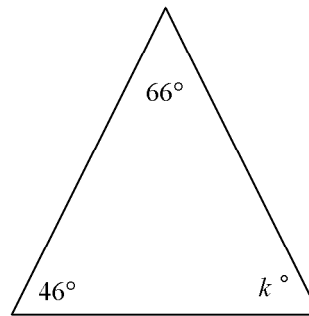
28. HM
 a. 5 b. -2 c. 6 d. 3

29. What is the slope of the line shown?



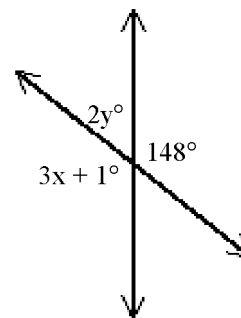
- a. -1 b. $-\frac{4}{5}$ c. $-\frac{3}{2}$ d. $-\frac{5}{4}$

27. Find the value of k . The diagram is not to scale.



- a. 20 b. 68 c. 112 d. 114

30. Find the values of x and y .

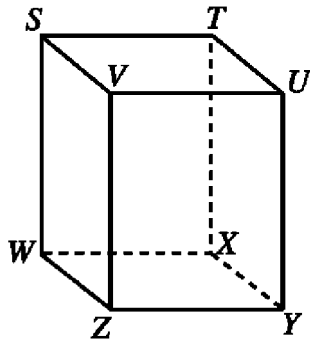


Drawing not to scale

- a. $x = 49, y = 16$ b. $x = 32, y = 148$ c. $x = 16, y = 49$ d. $x = 148, y = 32$

Determine whether \overleftrightarrow{WX} and \overleftrightarrow{YZ} are parallel, perpendicular, or neither.

31. $W(2, -2), X(3, 5), Y(4, 1), Z(2, 3)$
 a. neither b. parallel c. perpendicular
32. What is the intersection of plane $STUV$ and plane $UYXT$?



- a. \overleftrightarrow{TX} b. \overleftrightarrow{SV} c. \overleftrightarrow{YZ} d. \overleftrightarrow{ST}

33. Complete the two-column proof.

Given: $10x - 4y = -7; x = -3$

Prove: $\frac{-23}{4} = y$

$10x - 4y = -7; x = -3$ a. _____

$-30 - 4y = -7$ b. _____

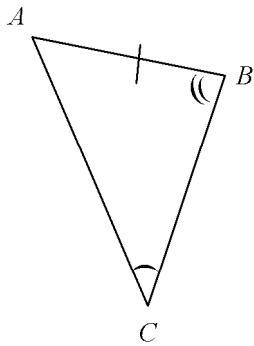
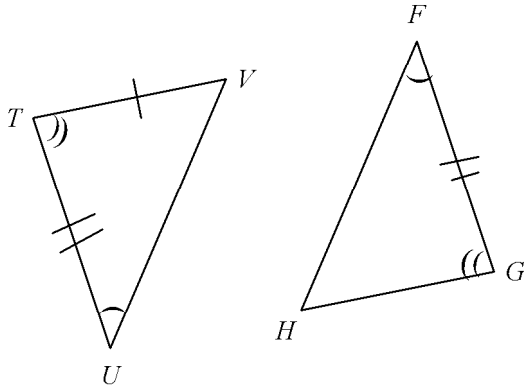
$-4y = 23$ c. _____

$y = \frac{-23}{4}$ d. _____

$\frac{-23}{4} = y$ e. _____

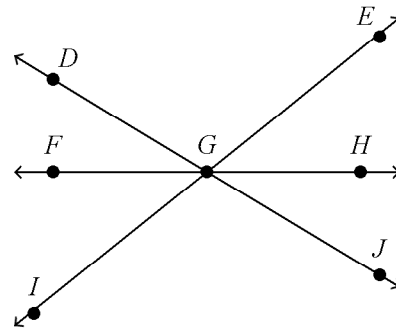
- a. a. Given
 b. Substitution Property
 c. Addition Property of Equality
 d. Division Property of Equality
 e. Reflexive Property of Equality
- b. a. Given
 b. Substitution Property
 c. Addition Property of Equality
 d. Addition Property of Equality
 e. Symmetric Property of Equality
- c. a. Given
 b. Substitution Property
 c. Addition Property of Equality
 d. Division Property of Equality
 e. Symmetric Property of Equality
- d. a. Given
 b. Symmetric Property of Equality
 c. Addition Property of Equality
 d. Division Property of Equality
 e. Reflexive Property of Equality
34. How many sides does a regular polygon have if each exterior angle measures 40° ?
 a. 12 sides b. 11 sides c. 9 sides d. 8 sides

35. Which triangles are congruent by ASA?



- a. $\triangle VTU$ and $\triangle HGF$ b. $\triangle HGF$ and $\triangle TVU$
 c. none d. $\triangle VTU$ and $\triangle ABC$

36. Name an angle vertical to $\angle EGH$.



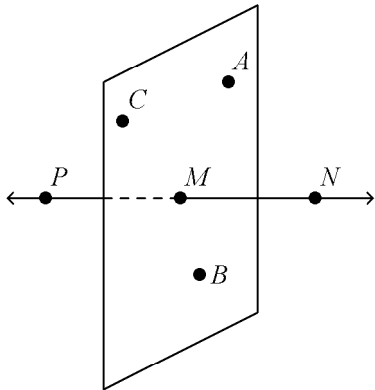
- a. $\angle HGI$ b. $\angle HGJ$ c. $\angle EGF$ d. $\angle IGF$

37. Use the Law of Detachment to draw a conclusion from the two given statements. If not possible, write *not possible*.
 Driving is difficult if the weather is stormy.

Driving is difficult.

- a. The weather is not stormy. b. If driving is difficult, then the weather is stormy. c. The weather is stormy.
 d. not possible

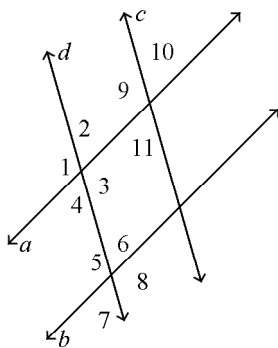
38. What are the names of three collinear points?



- a. Points C , M , and B are collinear. b. Points A , M , and B are collinear. c. Points C , M , and N are collinear. d. Points P , M , and N are collinear.

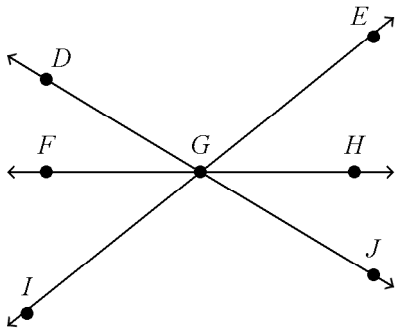
Given the following information, determine which lines, if any, are parallel. State the postulate or theorem that justifies your answer.

40. $\angle 10 \cong \angle 4$



- a. $a \parallel b$; congruent corresponding angles b. $a \parallel b$; congruent alternate exterior angles c. $c \parallel d$; congruent corresponding angles d. $c \parallel d$; congruent alternate exterior angles

41. Name an angle adjacent to $\angle DGE$.



- a. $\angle HGJ$ b. $\angle EGH$ c. $\angle JGI$ d. $\angle FGI$

43. What is the converse of the following conditional?

If a number is divisible by 6, then it is divisible by 2.

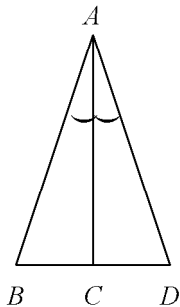
- a. If a number is not divisible by 6, then the number is not divisible by 2. b. If a number is divisible by 2, then it is divisible by 6. c. If a number is not divisible by 2, then it is not divisible by 6. d. If a number is divisible by 6, then it is divisible by 2.

44. Name the Property of Equality that justifies this statement:

If $x = y$, then $x - z = y - z$.

- a. Subtraction Property b. Division Property
c. Transitive Property d. Symmetric Property

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



- a. $\overline{AB} \cong \overline{AD}$ b. $\angle CBA \cong \angle CDA$ c. $\overline{AB} \cong \overline{AD}$
d. $\overline{AB} \perp \overline{AD}$

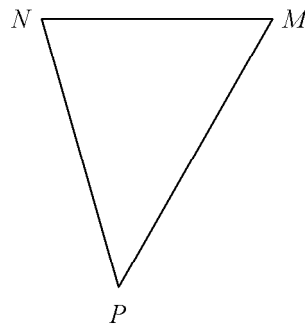
42. $\angle DFG$ and $\angle JKL$ are complementary angles. $m\angle DFG = x + 1$, and $m\angle JKL = x - 3$. Find the measure of each angle.

- a. $\angle DFG = 46$, $\angle JKL = 54$ b. $\angle DFG = 47$, $\angle JKL = 43$ c. $\angle DFG = 46$, $\angle JKL = 44$
d. $\angle DFG = 47$, $\angle JKL = 53$

46. Find the distance between points $P(4, 8)$ and $Q(9, 2)$ to the nearest tenth.

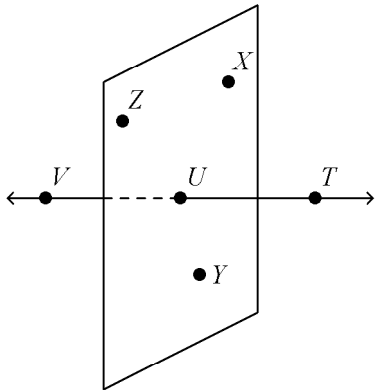
- a. 7.8 b. 61 c. 16.4 d. 11

47. Name the angle included by the sides \overline{MP} and \overline{PN} .



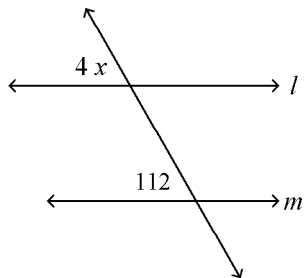
- a. $\angle M$ b. $\angle N$ c. $\angle P$ d. none of these

48. What are the names of four coplanar points?



- a. Points Z , X , T , and U are coplanar. b. Points Z , X , Y , and U are coplanar. c. Points Z , X , V , and U are coplanar. d. Points V , T , Z , and Y are coplanar.

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



- a. 68 b. 152 c. 28 d. 112
50. Find the coordinates of the midpoint of the segment whose endpoints are $H(10, 15)$ and $K(4, 13)$.
- a. $(7, 14)$ b. $(3, 1)$ c. $(14, 28)$ d. $(6, 2)$

**2011-2012 First Semester Exam review for computer Geometry cP
Answer Section**

MULTIPLE CHOICE

1. C
2. A
3. B
4. C
5. A
6. C
7. C
8. B
9. A
10. C
11. D
12. A
13. B
14. A
15. B
16. C
17. C
18. A
19. A
20. C
21. C
22. B
23. D
24. A
25. B
26. D
27. B
28. C
29. D
30. A
31. A
32. A
33. C
34. C
35. A
36. D
37. D
38. D

- 39. A
- 40. D
- 41. B
- 42. B
- 43. B
- 44. A
- 45. C
- 46. A
- 47. C
- 48. B
- 49. C
- 50. A