name		

period

Batch 505b8fa1

Transversal

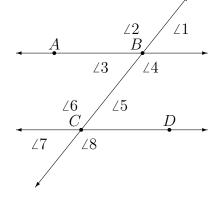
Version 1

Match pairs of angles to relationship name.

- (1) \[\] \(\alpha 1 & \alpha 7
- (A) linear pair
- (B) consecutive interior
- $(3) \qquad \angle 1 \& \angle 5$
- (C) alternate exterior
- (4) \[\] \(\alpha 2 & \alpha 3
- (D) corresponding
- (5) \[\lambda 5 & \angle 7
- (E) vertical pair

(F) alternate interior

- (6) \[\alpha 3 & \alpha 7
- (G) unrelated



- (7) List all of the angles which are congruent to ∠1
- (8) List all of the angles which are congruent to $\angle 4$
- (9) What is the relationship between $\angle 1$ and $\angle 4$
 - (A) complimentary
 - (B) supplementary
 - (C) unrelated
 - (D) congruent

name		

period

Batch 505b8fa1

Transversal

Version 2

∠3

 $\angle 5$

 $\angle 6$

*L*7

۷8

 $\angle 4$

D

Match pairs of angles to relationship name.

- (1) \[\] \(\alpha 1 & \alpha 7
- (A) alternate exterior
- (B) corresponding
- $(3) \qquad \angle 3 \& \angle 5$
- (C) consecutive interior
- (4) \[\lambda 1 & \lambda 5
- (D) unrelated
- (5) \[\] \(\lambda 6 & \times 7 \]
- (E) linear pair
- (F) vertical pair
- (6) \(\triangle 2 & \triangle 6
- (G) alternate interior

- (7) List all of the angles which are congruent to ∠5
- (8) List all of the angles which are congruent to $\angle 4$
- (9) What is the relationship between $\angle 5$ and $\angle 4$
 - (A) unrelated
 - (B) congruent
 - (C) complimentary
 - (D) supplementary

name		

period

Batch 505b8fa1

Transversal

Version 3

∠3

 $\angle 5$

 $\angle 6$

*L*7

۷8

 $\angle 4$

D

Match pairs of angles to relationship name.

- (1) \[\] \(\alpha 1 & \alpha 7
- (A) vertical pair
- (B) unrelated
- $(3) \qquad \angle 4 \& \angle 8$
- (C) alternate interior
- $(4) \qquad \angle 2 \& \angle 4$
- (D) linear pair
- (5) \[\lambda 1 & \angle 4
- (E) alternate exterior
- (F) consecutive interior
- (6) ____ ∠1 & ∠5
- (G) corresponding

- (7) List all of the angles which are congruent to $\angle 3$
- (8) List all of the angles which are congruent to ∠6
- (9) What is the relationship between $\angle 3$ and $\angle 6$
 - (A) congruent
 - (B) unrelated
 - (C) complimentary
 - (D) supplementary

name			

period

Batch 505b8fa1

Transversal

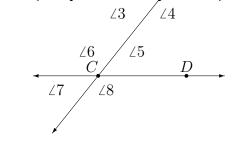
Version 4

Match pairs of angles to relationship name.

- (1) \[\] \(\angle 1 \& \angle 5
- (A) unrelated
- (2) \[\] \(\angle 5 \& \angle 7 \]
- (B) vertical pair
- $(3) \qquad \angle 2 \& \angle 8$
- (C) alternate exterior
- (4) \[\] \(\alpha \) \(\& \alpha \) \(6 \)
- (D) consecutive interior
- (5) \[\(\alpha 7 & \alpha 8 \)
- (E) corresponding

(F) linear pair

- (6) \[\] \(\alpha \) \(\delta \) \(\delta
- (G) alternate interior



- (7) List all of the angles which are congruent to $\angle 7$
- (8) List all of the angles which are congruent to ∠6
- (9) What is the relationship between ∠7 and ∠6
 - (A) unrelated
 - (B) congruent
 - (C) supplementary
 - (D) complimentary

name		

period

Batch 505b8fa1

Transversal

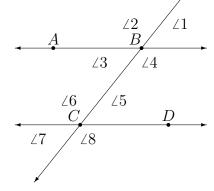
Version 5

Match pairs of angles to relationship name.

- (1) \[\] \(\angle 1 \& \angle 5
- (A) corresponding
- (2) \[\] \(\alpha \) \(\& \alpha \) \[8 \]
- (B) linear pair
- $(3) \qquad \angle 2 \& \angle 8$
- (C) consecutive interior
- (4) \[\] \(\alpha \) \(\delta \) \(\delta
- (D) alternate exterior
- (5) \[\] \(\lambda 5 & \lambda 8 \]
- (E) unrelated

(F) vertical pair

- (6) \[\] \(\24 \& \angle 6
- (G) alternate interior



- (7) List all of the angles which are congruent to ∠5
- (8) List all of the angles which are congruent to ∠6
- (9) What is the relationship between ∠5 and ∠6
 - (A) unrelated
 - (B) supplementary
 - (C) complimentary
 - (D) congruent

name		

∠3

 $\angle 5$

 $\angle 6$

*L*7

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 $\angle 4$

D

period

Batch 505b8fa1

Transversal

Version 6

Match pairs of angles to relationship name.

- (1) \[\] \(\alpha 1 & \alpha 4
- (A) alternate exterior
- (B) unrelated
- (3) \[\] \(\24 \& \angle 6
- (C) corresponding
- $(4) \qquad \angle 2 \& \angle 4$
- (D) consecutive interior
- (5) \[\lambda 1 & \angle 7
- (E) alternate interior
- (9) _____ 21 & 21
- (F) vertical pair
- (6) ____ ∠1 & ∠5
- (G) linear pair

- (7) List all of the angles which are congruent to $\angle 7$
- (8) List all of the angles which are congruent to $\angle 2$
- (9) What is the relationship between $\angle 7$ and $\angle 2$
 - (A) complimentary
 - (B) supplementary
 - (C) unrelated
 - (D) congruent

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period

Batch 505b8fa1

Transversal

Version 7

∠3

 $\angle 5$

 $\angle 6$

*L*7

۷8

 $\angle 4$

D

Match pairs of angles to relationship name.

- (1) \[\] \(\angle 2 & \angle 8
- (A) linear pair
- (B) consecutive interior
- $(3) \qquad \angle 5 \& \angle 7$
- (C) vertical pair

(E) unrelated

- (4) $\angle 4 \& \angle 5$
- (D) alternate exterior
- (5) \[\(\alpha 4 & \alpha \)
- (F) alternate interior
- (G) corresponding

- (7) List all of the angles which are congruent to $\angle 3$
- (8) List all of the angles which are congruent to ∠8
- (9) What is the relationship between $\angle 3$ and $\angle 8$
 - (A) complimentary
 - (B) unrelated
 - (C) supplementary
 - (D) congruent

name		

period

Batch 505b8fa1

Transversal

Version 8

∠3

 $\angle 5$

 $\angle 6$

*L*7

۷8

 $\angle 4$

D

Match pairs of angles to relationship name.

- (1) \[\] \(\angle 5 \& \angle 7 \]
- (A) vertical pair
- (2) \[\] \(\alpha 3 & \alpha 5
- (B) alternate interior
- $(3) \qquad \angle 4 \& \angle 5$
- (C) alternate exterior
- (4) \[\] \(\lambda 5 \& \angle 6
- (D) unrelated
- (5) \[\alpha 1 & \alpha 7
- (E) linear pair
- (F) consecutive interior
- (6) \(\angle 2 & \angle 6
- (G) corresponding

- (7) List all of the angles which are congruent to $\angle 1$
- (8) List all of the angles which are congruent to ∠8
- (9) What is the relationship between $\angle 1$ and $\angle 8$
 - (A) supplementary
 - (B) complimentary
 - (C) unrelated
 - (D) congruent

name		

∠3

 $\angle 5$

 $\angle 6$

*L*7

۷8

 $\angle 4$

D

period

Batch 505b8fa1

Transversal

Version 9

Match pairs of angles to relationship name.

- ∠3 & ∠5 (1)
- (A) alternate exterior
- ∠3 & ∠7
- (B) unrelated
- ∠6 & ∠8
- (C) linear pair
- ∠3 & ∠4
- (D) alternate interior
- (E) corresponding
- (5)∠1 & ∠7
- (F) vertical pair
- (6)∠1 & ∠5
- (G) consecutive interior

- List all of the angles which are congruent to $\angle 3$
- List all of the angles which are congruent to $\angle 6$
- What is the relationship between $\angle 3$ and $\angle 6$
 - (A) complimentary
 - (B) unrelated
 - (C) supplementary
 - (D) congruent

name		

period

Batch 505b8fa1

Transversal

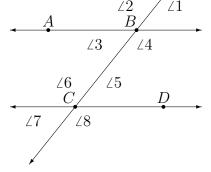
Version 10

Match pairs of angles to relationship name.

- (1) \[\] \(\lambda 5 & \lambda 8 \]
- (A) unrelated
- (B) alternate interior
- (3) \[\lambda 1 & \alpha 7
- (C) vertical pair
- (4) \[\] \(\lambda 6 & \times 48 \]
- (D) consecutive interior
- (5) \[\(\perp 1 \ \& \perp 5 \)
- (E) alternate exterior

(F) corresponding

- (6) \[\] \(\24 \& \angle 6
- (G) linear pair



- (7) List all of the angles which are congruent to $\angle 3$
- (8) List all of the angles which are congruent to ∠8
- (9) What is the relationship between $\angle 3$ and $\angle 8$
 - (A) unrelated
 - (B) supplementary
 - (C) complimentary
 - (D) congruent

name		

period

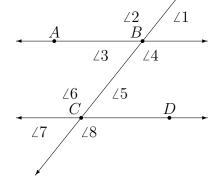
Batch 505b8fa1

Transversal

Version 11

Match pairs of angles to relationship name.

- (1) \[\] \(\angle 2 & \angle 8
- (A) vertical pair
- (B) alternate exterior
- (3) \[\] \(\24 \& \angle 6
- (C) corresponding
- (4) \[\] \(\lambda 6 & \times 7 \]
- (D) linear pair
- (E) alternate interior(F) consecutive interior
- (G) unrelated



- (7) List all of the angles which are congruent to ∠5
- (8) List all of the angles which are congruent to $\angle 4$
- (9) What is the relationship between $\angle 5$ and $\angle 4$
 - (A) congruent
 - (B) complimentary
 - (C) unrelated
 - (D) supplementary

name		

period

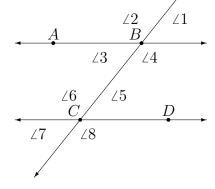
Batch 505b8fa1

Transversal

Version 12

Match pairs of angles to relationship name.

- (1) \[\] \(\alpha \) \(\delta \) \(\delta
- (A) alternate exterior
- (B) alternate interior
- (3) \[\] \(\lambda \) \(\lam
- (C) vertical pair
- (4) \[\lambda 2 & \lambda 8
- (D) unrelated
- (E) consecutive interior
- (5) \(\triangle 1 & \triangle 2
- (F) corresponding
- (G) linear pair



- (7) List all of the angles which are congruent to ∠5
- (8) List all of the angles which are congruent to ∠6
- (9) What is the relationship between $\angle 5$ and $\angle 6$
 - (A) complimentary
 - (B) congruent
 - (C) supplementary
 - (D) unrelated

name		

period

Batch 505b8fa1

Transversal

Version 13

∠3

 $\angle 5$

 $\angle 6$

*L*7

۷8

 $\angle 4$

D

Match pairs of angles to relationship name.

- (1) \[\] \(\angle 4 & \angle 8
- (A) linear pair
- (B) alternate exterior
- (3) \[\alpha 1 & \alpha 7
- (C) unrelated
- (D) consecutive interior
- (E) corresponding
- (5) ____ ∠4 & ∠6
- (F) vertical pair
- (G) alternate interior

- (7) List all of the angles which are congruent to $\angle 3$
- (8) List all of the angles which are congruent to ∠8
- (9) What is the relationship between $\angle 3$ and $\angle 8$
 - (A) congruent
 - (B) supplementary
 - (C) unrelated
 - (D) complimentary

name			

period

Batch 505b8fa1

Transversal

Version 14

∠3

 $\angle 5$

 $\angle 6$

*L*7

۷8

 $\angle 4$

D

Match pairs of angles to relationship name.

- (1) \[\] \(\angle 1 \& \angle 7
- (A) unrelated
- (B) linear pair
- $(3) \qquad \angle 2 \& \angle 4$
- (C) corresponding
- (4) \[\quad \lambda 4 & \quad \(\alpha \)
- (D) alternate interior
- (E) alternate exterior
- (F) vertical pair
- (6) ____ ∠3 & ∠7
- (G) consecutive interior

- (7) List all of the angles which are congruent to ∠5
- (8) List all of the angles which are congruent to ∠6
- (9) What is the relationship between $\angle 5$ and $\angle 6$
 - (A) supplementary
 - (B) complimentary
 - (C) unrelated
 - (D) congruent

name		

period

Batch 505b8fa1

Transversal

Version 15

∠3

 $\angle 5$

 $\angle 6$

*L*7

۷8

 $\angle 4$

D

Match pairs of angles to relationship name.

- (1) \[\] \(\alpha 2 & \alpha 4
- (A) vertical pair
- (B) corresponding
- $(3) \qquad \angle 1 \& \angle 7$
- (C) alternate exterior
- (4) \[\lambda 2 & \lambda 6
- (D) unrelated
- (E) alternate interior
- (5) ____ ∠4 & ∠6
- (F) consecutive interior
- (G) linear pair

- (7) List all of the angles which are congruent to $\angle 7$
- (8) List all of the angles which are congruent to $\angle 4$
- (9) What is the relationship between $\angle 7$ and $\angle 4$
 - (A) complimentary
 - (B) supplementary
 - (C) congruent
 - (D) unrelated

name		

period

Batch 505b8fa1

Transversal

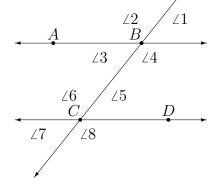
Version 16

Match pairs of angles to relationship name.

- (1) \[\] \(\alpha 2 & \alpha 8
- (A) consecutive interior
- (2) \[\] \(\lambda 5 \& \angle 7 \]
- (B) linear pair
- (3) \[\] \(\alpha 1 & \alpha 5
- (C) unrelated
- (4) \[\lambda 1 & \lambda 5
- (D) corresponding
- (5) \[\lambda 5 & \lambda 6
- (E) alternate interior

(F) alternate exterior

- (6) \[\(\alpha 4 & \alpha \)
- (G) vertical pair



- (7) List all of the angles which are congruent to $\angle 5$
- (8) List all of the angles which are congruent to $\angle 2$
- (9) What is the relationship between $\angle 5$ and $\angle 2$
 - (A) congruent
 - (B) complimentary
 - (C) unrelated
 - (D) supplementary

name			

period

Batch 505b8fa1

Transversal

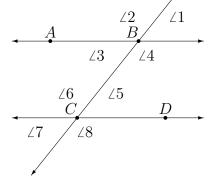
Version 17

Match pairs of angles to relationship name.

- (1) \[\] \(\24 \& \angle 6
- (A) vertical pair
- (B) linear pair
- $(3) \qquad \angle 1 \& \angle 7$
- (C) consecutive interior
- $(4) \qquad \qquad \angle 5 \& \angle 7$
- (D) alternate interior
- (5) \[\lambda 5 & \lambda 8
- (E) corresponding

(F) unrelated

- (6) \[\lambda 1 & \lambda 5
- (G) alternate exterior



- (7) List all of the angles which are congruent to ∠1
- (8) List all of the angles which are congruent to $\angle 4$
- (9) What is the relationship between $\angle 1$ and $\angle 4$
 - (A) supplementary
 - (B) unrelated
 - (C) congruent
 - (D) complimentary

name		

period

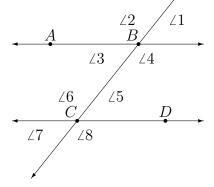
Batch 505b8fa1

Transversal

Version 18

Match pairs of angles to relationship name.

- (1) \[\] \(\angle 4 & \angle 8
- (A) consecutive interior
- (B) corresponding
- (3) \[\(\alpha \) \(\alpha \) \(\alpha \) \(\alpha \)
- (C) unrelated
- (4) \[\] \(\alpha \) \(\delta \) \(\delta
- (D) alternate interior
- (E) vertical pair(F) linear pair
- (6) \[\(\alpha 7 & \alpha 8 \)
- (G) alternate exterior



- (7) List all of the angles which are congruent to ∠1
- (8) List all of the angles which are congruent to $\angle 4$
- (9) What is the relationship between $\angle 1$ and $\angle 4$
 - (A) complimentary
 - (B) supplementary
 - (C) unrelated
 - (D) congruent

name		

period

Batch 505b8fa1

Transversal

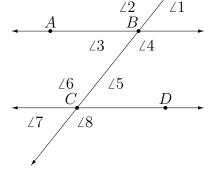
Version 19

Match pairs of angles to relationship name.

- (1) \[\] \(\angle 1 \& \angle 5
- (A) vertical pair
- (B) consecutive interior
- (3) \[\lambda 1 & \angle 4
- (C) unrelated
- (4) \[\alpha 1 & \alpha 7
- (D) alternate interior
- (E) corresponding

(F) linear pair

- (6) \[\] \(\24 \& \angle 6
- (G) alternate exterior



- (7) List all of the angles which are congruent to $\angle 3$
- (8) List all of the angles which are congruent to ∠8
- (9) What is the relationship between $\angle 3$ and $\angle 8$
 - (A) unrelated
 - (B) congruent
 - (C) complimentary
 - (D) supplementary

name		

period

Batch 505b8fa1

Transversal

Version 20

∠3

 $\angle 5$

 $\angle 6$

*L*7

۷8

 $\angle 4$

D

Match pairs of angles to relationship name.

- (1) \[\] \(\angle 5 \& \angle 7
- (A) linear pair
- (B) corresponding
- (3) \[\(\alpha \) \(\alpha \)
- (C) consecutive interior
- (4) \[\] \(\lambda 5 & \times 6
- (D) vertical pair
- (5) \[\] \(\alpha 2 & \alpha 6
- (E) unrelated
- (F) alternate interior
- (G) alternate exterior

- (7) List all of the angles which are congruent to $\angle 3$
- (8) List all of the angles which are congruent to ∠8
- (9) What is the relationship between $\angle 3$ and $\angle 8$
 - (A) supplementary
 - (B) complimentary
 - (C) unrelated
 - (D) congruent

name		

period

Batch 505b8fa1

Transversal

Version 21

∠3

 $\angle 5$

 $\angle 6$

*L*7

۷8

 $\angle 4$

D

Match pairs of angles to relationship name.

- ∠1 & ∠5 (1)
- (A) vertical pair
- ∠4 & ∠8
- (B) alternate exterior
- ∠2 & ∠3
- (C) corresponding
- ∠3 & ∠5
- (D) consecutive interior
- (5)
- (E) linear pair
- ∠1 & ∠7
- (F) unrelated
- (6)∠2 & ∠4
- (G) alternate interior

- List all of the angles which are congruent to $\angle 3$
- (8)List all of the angles which are congruent to $\angle 6$
- What is the relationship between $\angle 3$ and $\angle 6$
 - (A) complimentary
 - (B) congruent
 - (C) unrelated
 - (D) supplementary

name		

period

Batch 505b8fa1

Transversal

Version 22

∠3

 $\angle 5$

 $\angle 6$

*L*7

۷8

 $\angle 4$

D

Match pairs of angles to relationship name.

- (1) \[\] \(\angle 1 \& \angle 5
- (A) alternate exterior
- (B) vertical pair
- $(3) \qquad \angle 2 \& \angle 8$
- (C) consecutive interior
- $(4) \qquad \angle 1 \& \angle 2$
- (D) corresponding

(E) linear pair

- (F) alternate interior
- (G) unrelated

- (7) List all of the angles which are congruent to $\angle 3$
- (8) List all of the angles which are congruent to ∠6
- (9) What is the relationship between $\angle 3$ and $\angle 6$
 - (A) unrelated
 - (B) complimentary
 - (C) congruent
 - (D) supplementary

name			

period

Batch 505b8fa1

Transversal

Version 23

∠3

 $\angle 5$

 $\angle 6$

*L*7

۷8

 $\angle 4$

D

Match pairs of angles to relationship name.

- (1) \[\] \(\angle 2 & \angle 4
- (A) consecutive interior
- (2) \[\] \(\alpha \) \(\delta \) \(\alpha \)
- (B) vertical pair
- (3) \[\lambda 1 & \alpha 7
- (C) unrelated
- $(4) \qquad \qquad \angle 2 \& \angle 3$
- (D) alternate interior
- (5) \[\alpha 3 & \alpha 5
- (E) linear pair
- (F) corresponding
- (G) alternate exterior

- (7) List all of the angles which are congruent to $\angle 3$
- (8) List all of the angles which are congruent to ∠8
- (9) What is the relationship between $\angle 3$ and $\angle 8$
 - (A) congruent
 - (B) supplementary
 - (C) unrelated
 - (D) complimentary

name		

period

Batch 505b8fa1

Transversal

Version 24

∠3

 $\angle 5$

∠6

*L*7

۷8

 $\angle 4$

D

Match pairs of angles to relationship name.

- (1) \[\] \(\alpha \) \(\delta \) \(\delta
- (A) alternate interior
- (2) \[\] \(\lambda 5 \& \lambda 8
- (B) unrelated
- (3) \[\lambda 2 & \angle 4
- (C) linear pair
- $(4) \qquad \angle 1 \& \angle 7$
- (D) corresponding
- (E) vertical pair
- (F) consecutive interior
- (G) alternate exterior

- (7) List all of the angles which are congruent to $\angle 3$
- (8) List all of the angles which are congruent to ∠6
- (9) What is the relationship between $\angle 3$ and $\angle 6$
 - (A) supplementary
 - (B) unrelated
 - (C) complimentary
 - (D) congruent

name		

period

Batch 505b8fa1

Transversal

Version 25

∠3

 $\angle 5$

 $\angle 6$

*L*7

۷8

 $\angle 4$

D

Match pairs of angles to relationship name.

- (1) \[\] \(\alpha 2 & \alpha 4
- (A) corresponding
- (B) unrelated
- (3) \[\lambda 1 & \alpha 4
- (C) alternate interior
- (4) \[\] \(\alpha \) \(\& \alpha \) \[\]
- (D) consecutive interior
- (5) \[\] \(\alpha \) \(\delta \) \(\delta
- (E) vertical pair
- (F) linear pair
- (6) ____ ∠4 & ∠5
- (G) alternate exterior

- (7) List all of the angles which are congruent to ∠5
- (8) List all of the angles which are congruent to $\angle 4$
- (9) What is the relationship between $\angle 5$ and $\angle 4$
 - (A) complimentary
 - (B) unrelated
 - (C) supplementary
 - (D) congruent

Version 1	Version 2	Version 3	Version 4	Version 5
(1) C	(1) A	(1) E	(1) D	(1) C
(2) F	(2) F	(2) C	(2) B	(2) F
(3) B	(3) G	(3) G	(3) C	(3) D
(4) A	(4) C	$\parallel (4) A$	(4) G	(4) A
(5) E	(5) E	(5) D	(5) F	(5) B
(6) D	(6) B	(6) F	(6) E	(6) G
(7) $\angle 3$ $\angle 5$ $\angle 7$	(7) $\angle 1$ $\angle 3$ $\angle 7$	(7) $\angle 1$ $\angle 5$ $\angle 7$	(7) \(\alpha \) \(\alpha \) \(\alpha \)	(7) $\angle 1$ $\angle 3$ $\angle 7$
(8) $\angle 2$ $\angle 6$ $\angle 8$	(8) $\angle 2$ $\angle 6$ $\angle 8$	(8) $\angle 2$ $\angle 4$ $\angle 8$	(8) $\angle 2$ $\angle 4$ $\angle 8$	(8) $\angle 2$ $\angle 4$ $\angle 8$
(9) B	(9) D	(9) D	(9) C	(9) B
(0) 2][(0) 2		(0) 2
Version 6	Version 7	Version 8	Version 9	Version 10
(1) G	(1) D	(1) A	(1) D	(1) G
(2) D	(2) A	(2) B	(2) E	(2) D
$\mid (3) \mid E \mid$	(3) C	$\parallel (3) \text{ F}$	(3) F	(3) E
(4) F	(4) B	(4) E	(4) C	(4) C
(5) A	(5) F	(5) C	(5) A	(5) F
(6) C	(6) G	(6) G	(6) G	(6) B
(7) $\angle 1$ $\angle 3$ $\angle 5$	(7) $\angle 1$ $\angle 5$ $\angle 7$	(7) $\angle 3$ $\angle 5$ $\angle 7$	(7) $\angle 1$ $\angle 5$ $\angle 7$	(7) \(\alpha \) \(\alpha \) \(\alpha \)
(8) 4 4 46 48	(8) \(\alpha \) \(\alpha \)	(8) $\angle 2$ $\angle 4$ $\angle 6$	(8) $\angle 2$ $\angle 4$ $\angle 8$	(8) $\angle 2$ $\angle 4$ $\angle 6$
(9) B	(9) C	(9) A	(9) C	(9) B
7 7	W 10	W	17 14	17 15
Version 11	Version 12	Version 13	Version 14	Version 15
(1) B	(1) F	(1) E	(1) E	(1) A
(1) B (2) C	(1) F (2) E	(1) E (2) D	(1) E (2) B	(1) A (2) G
(1) B (2) C (3) E	(1) F (2) E (3) C	(1) E (2) D (3) B	(1) E (2) B (3) F	(1) A (2) G (3) C
(1) B (2) C (3) E (4) D	(1) F (2) E (3) C (4) A	(1) E (2) D (3) B (4) A	(1) E (2) B (3) F (4) D	(1) A (2) G (3) C (4) B
(1) B (2) C (3) E (4) D (5) F	(1) F (2) E (3) C (4) A (5) G	(1) E (2) D (3) B (4) A (5) G	(1) E (2) B (3) F (4) D (5) G	(1) A (2) G (3) C (4) B (5) E
(1) B (2) C (3) E (4) D (5) F (6) A	(1) F (2) E (3) C (4) A (5) G (6) B	(1) E (2) D (3) B (4) A (5) G (6) F	(1) E (2) B (3) F (4) D (5) G (6) C	(1) A (2) G (3) C (4) B (5) E (6) F
(1) B (2) C (3) E (4) D (5) F (6) A (7) \(\alpha\)1 \(\alpha\)3 \(\alpha\)7	(1) F (2) E (3) C (4) A (5) G (6) B (7) ∠1 ∠3 ∠7	(1) E (2) D (3) B (4) A (5) G (6) F (7) \(\alpha\)1 \(\alpha\)5 \(\alpha\)7	(1) E (2) B (3) F (4) D (5) G (6) C (7) ∠1 ∠3 ∠7	(1) A (2) G (3) C (4) B (5) E (6) F (7) \(\alpha\)1 \(\alpha\)3 \(\alpha\)5
(1) B (2) C (3) E (4) D (5) F (6) A	(1) F (2) E (3) C (4) A (5) G (6) B	(1) E (2) D (3) B (4) A (5) G (6) F	(1) E (2) B (3) F (4) D (5) G (6) C	(1) A (2) G (3) C (4) B (5) E (6) F
(1) B (2) C (3) E (4) D (5) F (6) A (7) \(\alpha\)1 \(\alpha\)3 \(\alpha\)7	(1) F (2) E (3) C (4) A (5) G (6) B (7) ∠1 ∠3 ∠7	(1) E (2) D (3) B (4) A (5) G (6) F (7) \(\alpha\)1 \(\alpha\)5 \(\alpha\)7	(1) E (2) B (3) F (4) D (5) G (6) C (7) ∠1 ∠3 ∠7	(1) A (2) G (3) C (4) B (5) E (6) F (7) \(\alpha\)1 \(\alpha\)3 \(\alpha\)5
(1) B (2) C (3) E (4) D (5) F (6) A (7) \(\alpha\)1 \(\alpha\)3 \(\alpha\)7 (8) \(\alpha\)2 \(\alpha\)6 \(\alpha\)8 (9) D	(1) F (2) E (3) C (4) A (5) G (6) B (7) \(\alpha\)1 \(\alpha\)3 \(\alpha\)7 (8) \(\alpha\)2 \(\alpha\)4 \(\alpha\)8 (9) C	(1) E (2) D (3) B (4) A (5) G (6) F (7) \(\alpha\)1 \(\alpha\)5 \(\alpha\)7 (8) \(\alpha\)2 \(\alpha\)4 \(\alpha\)6 (9) B	(1) E (2) B (3) F (4) D (5) G (6) C (7) \(\alpha\)1 \(\alpha\)3 \(\alpha\)7 (8) \(\alpha\)2 \(\alpha\)4 \(\alpha\)8 (9) A	(1) A (2) G (3) C (4) B (5) E (6) F (7) \(\perp1\) \(\perp3\) \(\perp3\) \(\perp5\) (8) \(\perp2\) \(\perp6\) \(\perp8\) (9) B
(1) B (2) C (3) E (4) D (5) F (6) A (7) \(\alpha\)1 \(\alpha\)3 \(\alpha\)7 (8) \(\alpha\)2 \(\alpha\)6 \(\alpha\)8 (9) D	(1) F (2) E (3) C (4) A (5) G (6) B (7) \(\alpha\)1 \(\alpha\)3 \(\alpha\)7 (8) \(\alpha\)2 \(\alpha\)4 \(\alpha\)8 (9) C	(1) E (2) D (3) B (4) A (5) G (6) F (7) \(\alpha\)1 \(\alpha\)5 \(\alpha\)7 (8) \(\alpha\)2 \(\alpha\)4 \(\alpha\)6 (9) B	(1) E (2) B (3) F (4) D (5) G (6) C (7) \(\alpha\)1 \(\alpha\)3 \(\alpha\)7 (8) \(\alpha\)2 \(\alpha\)4 \(\alpha\)8 (9) A	(1) A (2) G (3) C (4) B (5) E (6) F (7) \(\perp 1\) \(\perp 3\) \(\perp 5\) (8) \(\perp 2\) \(\perp 6\) \(\perp 8\) Version 20
(1) B (2) C (3) E (4) D (5) F (6) A (7) \(\alpha\) 1 \(\alpha\) 3 \(\alpha\) 7 (8) \(\alpha\) 2 \(\alpha\) 6 \(\alpha\) 8 (9) D Version 16	(1) F (2) E (3) C (4) A (5) G (6) B (7) \(\alpha\)1 \(\alpha\)3 \(\alpha\)7 (8) \(\alpha\)2 \(\alpha\)4 \(\alpha\)8 (9) C Version 17	(1) E (2) D (3) B (4) A (5) G (6) F (7) \(\alpha\)1 \(\alpha\)5 \(\alpha\)7 (8) \(\alpha\)2 \(\alpha\)4 \(\alpha\)6 (9) B Version 18	(1) E (2) B (3) F (4) D (5) G (6) C (7) \(\alpha\) 1 \(\alpha\) 3 \(\alpha\) 7 (8) \(\alpha\) 2 \(\alpha\) 4 \(\alpha\) 8 (9) A Version 19	(1) A (2) G (3) C (4) B (5) E (6) F (7) \(\perceq 1\) \(\perceq 3\) \(\perceq 5\) \((\perceq 8\) \(\perceq 2\) \(\perceq 6\) \(\perceq 8\) \((\perceq 9\) B\) Version 20
(1) B (2) C (3) E (4) D (5) F (6) A (7) \(\alpha\)1 \(\alpha\)3 \(\alpha\)7 (8) \(\alpha\)2 \(\alpha\)6 \(\alpha\)8 (9) D Version 16 (1) F (2) G	(1) F (2) E (3) C (4) A (5) G (6) B (7) \(\alpha\)1 \(\alpha\)3 \(\alpha\)7 (8) \(\alpha\)2 \(\alpha\)4 \(\alpha\)8 (9) C Version 17 (1) D (2) E	(1) E (2) D (3) B (4) A (5) G (6) F (7) \(\alpha\)1 \(\alpha\)5 \(\alpha\)7 (8) \(\alpha\)2 \(\alpha\)4 \(\alpha\)6 (9) B Version 18	(1) E (2) B (3) F (4) D (5) G (6) C (7) \(\alpha\)1 \(\alpha\)3 \(\alpha\)7 (8) \(\alpha\)2 \(\alpha\)4 \(\alpha\)8 (9) A Version 19 (1) B (2) A	(1) A (2) G (3) C (4) B (5) E (6) F (7) \(\perp 1\) \(\perp 3\) \(\perp 5\) (8) \(\perp 2\) \(\perp 6\) \(\perp 8\) (9) B Version 20 (1) D (2) F
(1) B (2) C (3) E (4) D (5) F (6) A (7) \(\alpha\)1 \(\alpha\)3 \(\alpha\)7 (8) \(\alpha\)2 \(\alpha\)6 \(\alpha\)8 (9) D Version 16 (1) F (2) G (3) A	(1) F (2) E (3) C (4) A (5) G (6) B (7) ∠1 ∠3 ∠7 (8) ∠2 ∠4 ∠8 (9) C Version 17 (1) D (2) E (3) G	(1) E (2) D (3) B (4) A (5) G (6) F (7) ∠1 ∠5 ∠7 (8) ∠2 ∠4 ∠6 (9) B Version 18 (1) B (2) A (3) E	(1) E (2) B (3) F (4) D (5) G (6) C (7) ∠1 ∠3 ∠7 (8) ∠2 ∠4 ∠8 (9) A Version 19 (1) B (2) A (3) F	(1) A (2) G (3) C (4) B (5) E (6) F (7) \(\perp 1\) \(\perp 3\) \(\perp 5\) (8) \(\perp 2\) \(\perp 6\) \(\perp 8\) (9) B Version 20 (1) D (2) F (3) G
(1) B (2) C (3) E (4) D (5) F (6) A (7) \(\alpha\) 1 \(\alpha\) 3 \(\alpha\) 7 (8) \(\alpha\) 2 \(\alpha\) 6 \(\alpha\) 8 (9) D Version 16 (1) F (2) G (3) A (4) D	(1) F (2) E (3) C (4) A (5) G (6) B (7) \(\alpha \) 1 \(\alpha \) 2 \(\alpha \) 4 \(\alpha \) 8 (9) C Version 17 (1) D (2) E (3) G (4) A	(1) E (2) D (3) B (4) A (5) G (6) F (7) \(\alpha\)1 \(\alpha\)5 \(\alpha\)7 (8) \(\alpha\)2 \(\alpha\)4 \(\alpha\)6 (9) B Version 18 (1) B (2) A (3) E (4) D	(1) E (2) B (3) F (4) D (5) G (6) C (7) \(\alpha\)1 \(\alpha\)3 \(\alpha\)7 (8) \(\alpha\)2 \(\alpha\)4 \(\alpha\)8 (9) A Version 19 (1) B (2) A (3) F (4) G	(1) A (2) G (3) C (4) B (5) E (6) F (7) \(\alpha\)1 \(\alpha\)3 \(\alpha\)5 (8) \(\alpha\)2 \(\alpha\)6 \(\alpha\)8 (9) B Version 20 (1) D (2) F (3) G (4) A
(1) B (2) C (3) E (4) D (5) F (6) A (7) ∠1 ∠3 ∠7 (8) ∠2 ∠6 ∠8 (9) D Version 16 (1) F (2) G (3) A (4) D (5) B	(1) F (2) E (3) C (4) A (5) G (6) B (7) ∠1 ∠3 ∠7 (8) ∠2 ∠4 ∠8 (9) C Version 17 (1) D (2) E (3) G (4) A (5) B	(1) E (2) D (3) B (4) A (5) G (6) F (7) \(\perceq 1\) \(\perceq 5\) \(\perceq 7\) (8) \(\perceq 2\) \(\perceq 4\) \(\perceq 6\) (9) B Version 18 (1) B (2) A (3) E (4) D (5) G	(1) E (2) B (3) F (4) D (5) G (6) C (7) \(\perceq 1\) \(\perceq 3\) \(\perceq 4\) \(\perceq 8\) \(\perceq 2\) \(\perceq 4\) \(\perceq 8\) \(\perceq 9\) A Version 19 (1) B (2) A (3) F (4) G (5) E	(1) A (2) G (3) C (4) B (5) E (6) F (7) \(\perceq 1\) \(\perceq 3\) \(\perceq 6\) \(\perceq 8\) (9) B Version 20 (1) D (2) F (3) G (4) A (5) B
(1) B (2) C (3) E (4) D (5) F (6) A (7) ∠1 ∠3 ∠7 (8) ∠2 ∠6 ∠8 (9) D Version 16 (1) F (2) G (3) A (4) D (5) B (6) E	(1) F (2) E (3) C (4) A (5) G (6) B (7) ∠1 ∠3 ∠7 (8) ∠2 ∠4 ∠8 (9) C Version 17 (1) D (2) E (3) G (4) A (5) B (6) C	(1) E (2) D (3) B (4) A (5) G (6) F (7) ∠1 ∠5 ∠7 (8) ∠2 ∠4 ∠6 (9) B Version 18 (1) B (2) A (3) E (4) D (5) G (6) F	(1) E (2) B (3) F (4) D (5) G (6) C (7) \(\alpha\) 1 \(\alpha\) 2 \(\alpha\) 4 \(\alpha\) 8 (9) A Version 19 (1) B (2) A (3) F (4) G (5) E (6) D	(1) A (2) G (3) C (4) B (5) E (6) F (7) \(\perp 1\) \(\perp 3\) \(\perp 5\) (8) \(\perp 2\) \(\perp 6\) \(\perp 8\) (9) B Version 20 (1) D (2) F (3) G (4) A (5) B (6) C
(1) B (2) C (3) E (4) D (5) F (6) A (7) \(\alpha \) \(\	(1) F (2) E (3) C (4) A (5) G (6) B (7) \(\alpha \) 1 \(\alpha \) 2 \(\alpha \) 4 \(\alpha \) 8 (9) C Version 17 (1) D (2) E (3) G (4) A (5) B (6) C (7) \(\alpha \) 3 \(\alpha \) 5 \(\alpha \) 7	(1) E (2) D (3) B (4) A (5) G (6) F (7) \(\alpha\)1 \(\alpha\)5 \(\alpha\)7 (8) \(\alpha\)2 \(\alpha\)4 \(\alpha\)6 (9) B Version 18 (1) B (2) A (3) E (4) D (5) G (6) F (7) \(\alpha\)3 \(\alpha\)5 \(\alpha\)7	(1) E (2) B (3) F (4) D (5) G (6) C (7) \(\perceq 1\) \(\frac{2}{2}\) \(\perceq 4\) \(\perceq 8\) (9) A Version 19 (1) B (2) A (3) F (4) G (5) E (6) D (7) \(\perceq 1\) \(\perceq 5\) \(\perceq 2\)	(1) A (2) G (3) C (4) B (5) E (6) F (7) \(\perp 1\) \(\perp 3\) \(\perp 5\) (8) \(\perp 2\) \(\perp 6\) \(\perp 8\) (9) B Version 20 (1) D (2) F (3) G (4) A (5) B (6) C (7) \(\perp 1\) \(\perp 5\) \(\perp 7\)
(1) B (2) C (3) E (4) D (5) F (6) A (7) ∠1 ∠3 ∠7 (8) ∠2 ∠6 ∠8 (9) D Version 16 (1) F (2) G (3) A (4) D (5) B (6) E	(1) F (2) E (3) C (4) A (5) G (6) B (7) ∠1 ∠3 ∠7 (8) ∠2 ∠4 ∠8 (9) C Version 17 (1) D (2) E (3) G (4) A (5) B (6) C	(1) E (2) D (3) B (4) A (5) G (6) F (7) ∠1 ∠5 ∠7 (8) ∠2 ∠4 ∠6 (9) B Version 18 (1) B (2) A (3) E (4) D (5) G (6) F	(1) E (2) B (3) F (4) D (5) G (6) C (7) \(\alpha\) 1 \(\alpha\) 2 \(\alpha\) 4 \(\alpha\) 8 (9) A Version 19 (1) B (2) A (3) F (4) G (5) E (6) D	(1) A (2) G (3) C (4) B (5) E (6) F (7) \(\perp 1\) \(\perp 3\) \(\perp 5\) (8) \(\perp 2\) \(\perp 6\) \(\perp 8\) (9) B Version 20 (1) D (2) F (3) G (4) A (5) B (6) C

Version 21	Version 22	Version 23	Version 24	Version 25
(1) D	(1) C	(1) B	(1) A	(1) E
(2) C	(2) D	(2) F	(2) C	(2) G
(3) E	(3) A	(3) G	(3) E	(3) F
(4) G	(4) E	(4) E	(4) G	(4) A
(5) B	(5) F	(5) D	(5) D	(5) C
(6) A	(6) B	(6) A	(6) F	(6) D
$(7) \angle 1 \angle 5 \angle 7$	(7) $\angle 1$ $\angle 5$ $\angle 7$	(7) \(\alpha 1 \) \(\alpha 5 \) \(\alpha 7 \)	(7) $\angle 1$ $\angle 5$ $\angle 7$	(7) $\angle 1$ $\angle 3$ $\angle 7$
(8) $\angle 2$ $\angle 4$ $\angle 8$	(8) \(\alpha \) \(\alpha \) \(\alpha \)	(8) \(\alpha \) \(\alpha \) \(\alpha \)	(8) \(\alpha \) \(\alpha \) \(\alpha \)	(8) \(\alpha \) \(\alpha \) \(\alpha \)
(9) D	(9) D	(9) B	(9) A	(9) C