

name

date

period

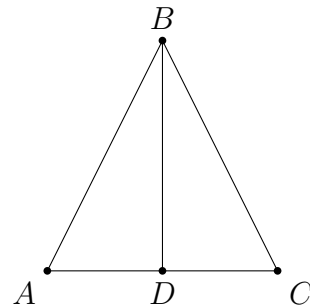
Batch 505f32e9

# Congruent Triangles

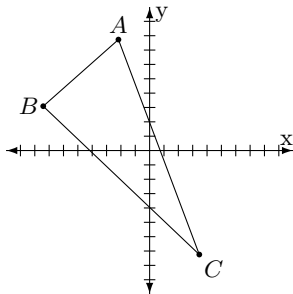
Version 1

Match the theorem to the method of proof.

- (1)  If  $\overline{AB} \cong \overline{BC}$  and  $\overline{BD} \perp \overline{AC}$  then  $\triangle ABD \cong \triangle CBD$ .
- (2)  If  $\overline{BD}$  is a perpendicular bisector to  $\overline{AC}$  then  $\triangle ABD \cong \triangle CBD$ .
- (3)  If  $\overline{AB} \cong \overline{BC}$  and  $\overline{BD}$  bisects  $\overline{AC}$  then  $\triangle ABD \cong \triangle CBD$ .
- (4)  If  $\triangle ABD \cong \triangle CBD$  then  $\overline{BD}$  is a perpendicular bisector to  $\overline{AC}$ .
- (5)  If  $\overline{BD}$  bisects  $\angle B$  and  $\overline{BD} \perp \overline{AC}$  then  $\triangle ABD \cong \triangle CBD$ .
- (6)  If  $\angle A \cong \angle C$  and  $\overline{BD}$  bisects  $\angle B$  then  $\triangle ABD \cong \triangle CBD$ .
- (A) SSS (Side Side Side)  
 (B) AAS (Angle Angle Side)  
 (C) CPCTC (Corresponding Parts of Congruent Triangles are Congruent)  
 (D) SAS (Side Angle Side)  
 (E) ASA (Angle Side Angle)  
 (F) HL (Hypotenuse Leg)



Check if  $\triangle ABC \cong \triangle DEF$  by SSS.



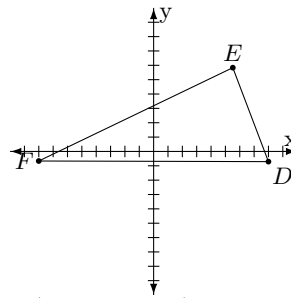
	$x$	$y$
A	-2.17233	7.73011
B	-7.41191	3.08826
C	3.4607	-7.2455

(7)  =  $AB$ .

(8)  =  $BC$ .

(9)  =  $AC$ .

Round answers to 2 decimals.



	$x$	$y$
D	7.9981	-0.70997
E	5.51587	5.83514
F	-8.00184	-0.66652

(10)  =  $DE$ .

(11)  =  $EF$ .

(12)  =  $DF$ .

name

date

period

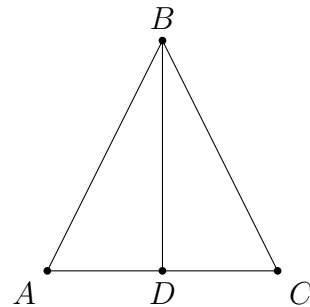
Batch 505f32e9

# Congruent Triangles

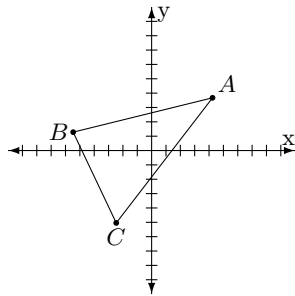
Version 2

Match the theorem to the method of proof.

- (1)  If  $\overline{AB} \cong \overline{BC}$  and  $\overline{BD}$  bisects  $\overline{AC}$  then  $\triangle ABD \cong \triangle CBD$ .
- (2)  If  $\overline{BD}$  is a perpendicular bisector to  $\overline{AC}$  then  $\triangle ABD \cong \triangle CBD$ .
- (3)  If  $\overline{AB} \cong \overline{BC}$  and  $\overline{BD} \perp \overline{AC}$  then  $\triangle ABD \cong \triangle CBD$ .
- (4)  If  $\triangle ABD \cong \triangle CBD$  then  $\overline{BD}$  is a perpendicular bisector to  $\overline{AC}$ .
- (5)  If  $\angle A \cong \angle C$  and  $\overline{BD}$  bisects  $\angle B$  then  $\triangle ABD \cong \triangle CBD$ .
- (6)  If  $\overline{BD}$  bisects  $\angle B$  and  $\overline{BD} \perp \overline{AC}$  then  $\triangle ABD \cong \triangle CBD$ .
- (A) CPCTC (Corresponding Parts of Congruent Triangles are Congruent)  
 (B) HL (Hypotenuse Leg)  
 (C) ASA (Angle Side Angle)  
 (D) AAS (Angle Angle Side)  
 (E) SSS (Side Side Side)  
 (F) SAS (Side Angle Side)



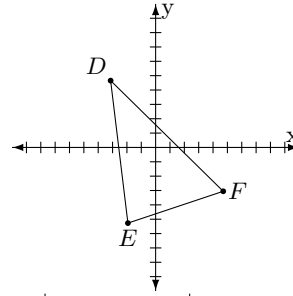
Check if  $\triangle ABC \cong \triangle DEF$  by SSS.



	$x$	$y$
A	4.24408	3.67399
B	-5.46534	1.28083
C	-2.46465	-5.0434

- (7)  =  $AB$ .
- (8)  =  $BC$ .
- (9)  =  $AC$ .

Round answers to 2 decimals.



	$x$	$y$
D	-3.13563	4.65599
E	-1.93026	-5.2711
F	4.70955	-3.0546

- (10)  =  $DE$ .
- (11)  =  $EF$ .
- (12)  =  $DF$ .

name

date

period

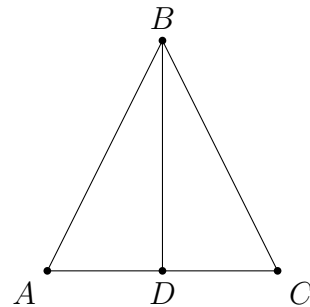
Batch 505f32e9

# Congruent Triangles

Version 3

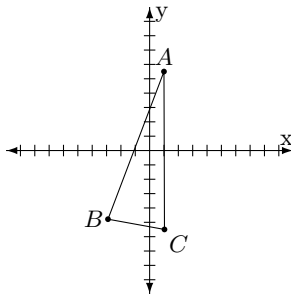
Match the theorem to the method of proof.

- (1)  If  $\overline{AB} \cong \overline{BC}$  and  $\overline{BD} \perp \overline{AC}$  then  $\triangle ABD \cong \triangle CBD$ .
- (2)  If  $\overline{BD}$  bisects  $\angle B$  and  $\overline{BD} \perp \overline{AC}$  then  $\triangle ABD \cong \triangle CBD$ .
- (3)  If  $\angle A \cong \angle C$  and  $\overline{BD}$  bisects  $\angle B$  then  $\triangle ABD \cong \triangle CBD$ .
- (4)  If  $\overline{AB} \cong \overline{BC}$  and  $\overline{BD}$  bisects  $\overline{AC}$  then  $\triangle ABD \cong \triangle CBD$ .
- (5)  If  $\overline{BD}$  is a perpendicular bisector to  $\overline{AC}$  then  $\triangle ABD \cong \triangle CBD$ .
- (6)  If  $\triangle ABD \cong \triangle CBD$  then  $\overline{BD}$  is a perpendicular bisector to  $\overline{AC}$ .
- (A) CPCTC (Corresponding Parts of Congruent Triangles are Congruent)  
 (B) AAS (Angle Angle Side)  
 (C) SAS (Side Angle Side)  
 (D) SSS (Side Side Side)  
 (E) HL (Hypotenuse Leg)  
 (F) ASA (Angle Side Angle)

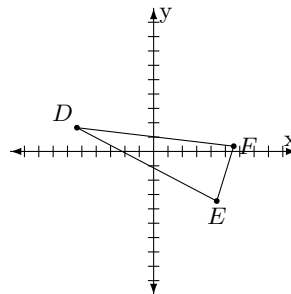


Check if  $\triangle ABC \cong \triangle DEF$  by SSS.

Round answers to 2 decimals.



	$x$	$y$
A	0.99946	5.5032
B	-2.90119	-4.78197
C	1.03443	-5.49674



	$x$	$y$
D	-5.34261	1.65551
E	4.39741	-3.45644
F	5.58135	0.36433

(7)  =  $AB$ .

(10)  =  $DE$ .

(8)  =  $BC$ .

(11)  =  $EF$ .

(9)  =  $AC$ .

(12)  =  $DF$ .

name

date

period

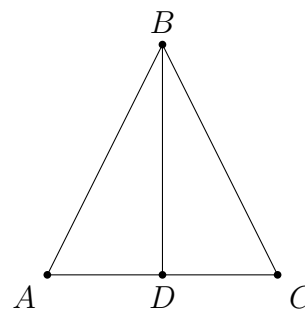
Batch 505f32e9

# Congruent Triangles

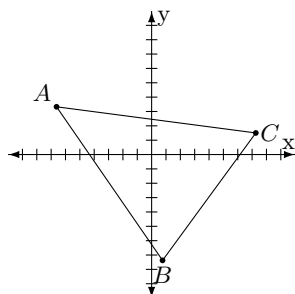
Version 4

Match the theorem to the method of proof.

- (1)  If  $\triangle ABD \cong \triangle CBD$  then  $\overline{BD}$  is a perpendicular bisector to  $\overline{AC}$ . (A) SAS (Side Angle Side)  
 (B) HL (Hypotenuse Leg)  
 (C) ASA (Angle Side Angle)  
 (D) SSS (Side Side Side)  
 (E) CPCTC (Corresponding Parts of Congruent Triangles are Congruent)  
 (F) AAS (Angle Angle Side)
- (2)  If  $\overline{BD}$  is a perpendicular bisector to  $\overline{AC}$  then  $\triangle ABD \cong \triangle CBD$ .
- (3)  If  $\overline{AB} \cong \overline{BC}$  and  $\overline{BD}$  bisects  $\overline{AC}$  then  $\triangle ABD \cong \triangle CBD$ .
- (4)  If  $\overline{BD}$  bisects  $\angle B$  and  $\overline{BD} \perp \overline{AC}$  then  $\triangle ABD \cong \triangle CBD$ .
- (5)  If  $\angle A \cong \angle C$  and  $\overline{BD}$  bisects  $\angle B$  then  $\triangle ABD \cong \triangle CBD$ .
- (6)  If  $\overline{AB} \cong \overline{BC}$  and  $\overline{BD} \perp \overline{AC}$  then  $\triangle ABD \cong \triangle CBD$ .

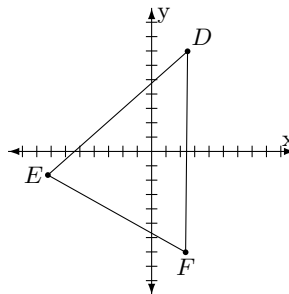


Check if  $\triangle ABC \cong \triangle DEF$  by SSS.



	$x$	$y$
A	-6.62348	3.32623
B	0.76137	-7.37256
C	7.25748	1.50441

Round answers to 2 decimals.



	$x$	$y$
D	2.50361	6.97612
E	-7.22703	-1.64448
F	2.36823	-7.02323

- (7)  =  $AB$ .
- (8)  =  $BC$ .
- (9)  =  $AC$ .

- (10)  =  $DE$ .
- (11)  =  $EF$ .
- (12)  =  $DF$ .

name

date

period

Batch 505f32e9

# Congruent Triangles

Version 5

Match the theorem to the method of proof.

(1)  If  $\angle A \cong \angle C$  and  $\overline{BD}$  bisects  $\angle B$  then  $\triangle ABD \cong \triangle CBD$ .

(2)  If  $\overline{AB} \cong \overline{BC}$  and  $\overline{BD}$  bisects  $\overline{AC}$  then  $\triangle ABD \cong \triangle CBD$ .

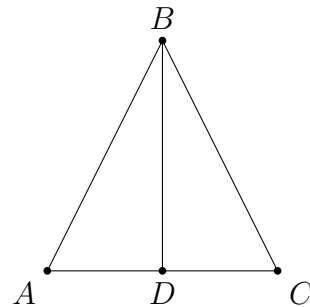
(3)  If  $\overline{BD}$  bisects  $\angle B$  and  $\overline{BD} \perp \overline{AC}$  then  $\triangle ABD \cong \triangle CBD$ .

(4)  If  $\overline{AB} \cong \overline{BC}$  and  $\overline{BD} \perp \overline{AC}$  then  $\triangle ABD \cong \triangle CBD$ .

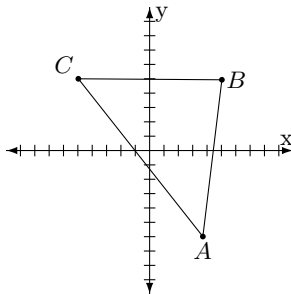
(5)  If  $\overline{BD}$  is a perpendicular bisector to  $\overline{AC}$  then  $\triangle ABD \cong \triangle CBD$ .

(6)  If  $\triangle ABD \cong \triangle CBD$  then  $\overline{BD}$  is a perpendicular bisector to  $\overline{AC}$ .

- (A) AAS (Angle Angle Side)
- (B) CPCTC (Corresponding Parts of Congruent Triangles are Congruent)
- (C) SAS (Side Angle Side)
- (D) SSS (Side Side Side)
- (E) ASA (Angle Side Angle)
- (F) HL (Hypotenuse Leg)



Check if  $\triangle ABC \cong \triangle DEF$  by SSS.



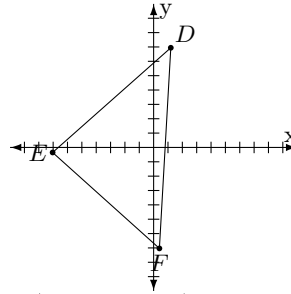
	$x$	$y$
A	3.70847	-5.99068
B	5.03437	4.92911
C	-4.96539	4.99859

(7)  =  $AB$ .

(8)  =  $BC$ .

(9)  =  $AC$ .

Round answers to 2 decimals.



	$x$	$y$
D	1.19673	6.94326
E	-7.03689	-0.35109
F	0.40197	-7.03416

(10)  =  $DE$ .

(11)  =  $EF$ .

(12)  =  $DF$ .

name

date

period

Batch 505f32e9

# Congruent Triangles

Version 6

Match the theorem to the method of proof.

(1)  If  $\overline{AB} \cong \overline{BC}$  and  $\overline{BD}$  bisects  $\overline{AC}$  then  $\triangle ABD \cong \triangle CBD$ .

(2)  If  $\overline{BD}$  is a perpendicular bisector to  $\overline{AC}$  then  $\triangle ABD \cong \triangle CBD$ .

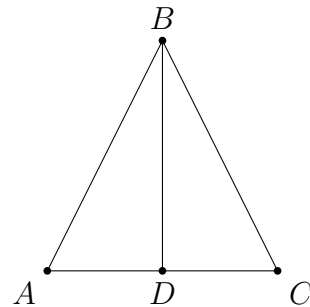
(3)  If  $\overline{BD}$  bisects  $\angle B$  and  $\overline{BD} \perp \overline{AC}$  then  $\triangle ABD \cong \triangle CBD$ .

(4)  If  $\angle A \cong \angle C$  and  $\overline{BD}$  bisects  $\angle B$  then  $\triangle ABD \cong \triangle CBD$ .

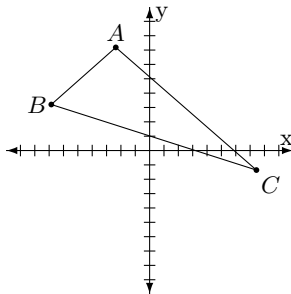
(5)  If  $\overline{AB} \cong \overline{BC}$  and  $\overline{BD} \perp \overline{AC}$  then  $\triangle ABD \cong \triangle CBD$ .

(6)  If  $\triangle ABD \cong \triangle CBD$  then  $\overline{BD}$  is a perpendicular bisector to  $\overline{AC}$ .

- (A) SAS (Side Angle Side)
- (B) HL (Hypotenuse Leg)
- (C) ASA (Angle Side Angle)
- (D) CPCTC (Corresponding Parts of Congruent Triangles are Congruent)
- (E) SSS (Side Side Side)
- (F) AAS (Angle Angle Side)



Check if  $\triangle ABC \cong \triangle DEF$  by SSS.



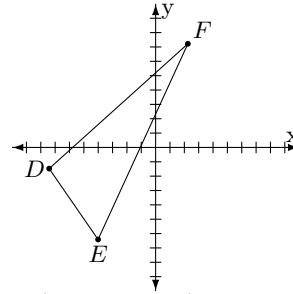
	$x$	$y$
A	-2.3578	7.18546
B	-6.84886	3.20672
C	7.43917	-1.35968

(7)  =  $AB$ .

(8)  =  $BC$ .

(9)  =  $AC$ .

Round answers to 2 decimals.



	$x$	$y$
D	-7.41727	-1.4745
E	-4.00888	-6.4124
F	2.24646	7.22104

(10)  =  $DE$ .

(11)  =  $EF$ .

(12)  =  $DF$ .

name

date

period

Batch 505f32e9

# Congruent Triangles

Version 7

Match the theorem to the method of proof.

(1)  If  $\overline{BD}$  bisects  $\angle B$  and  $\overline{BD} \perp \overline{AC}$  then  $\triangle ABD \cong \triangle CBD$ .

(2)  If  $\triangle ABD \cong \triangle CBD$  then  $\overline{BD}$  is a perpendicular bisector to  $\overline{AC}$ .

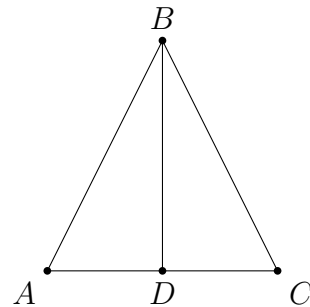
(3)  If  $\overline{AB} \cong \overline{BC}$  and  $\overline{BD} \perp \overline{AC}$  then  $\triangle ABD \cong \triangle CBD$ .

(4)  If  $\overline{BD}$  is a perpendicular bisector to  $\overline{AC}$  then  $\triangle ABD \cong \triangle CBD$ .

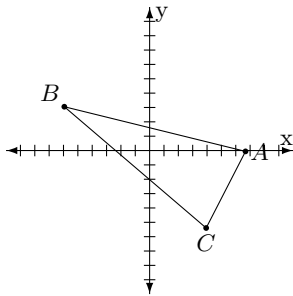
(5)  If  $\angle A \cong \angle C$  and  $\overline{BD}$  bisects  $\angle B$  then  $\triangle ABD \cong \triangle CBD$ .

(6)  If  $\overline{AB} \cong \overline{BC}$  and  $\overline{BD}$  bisects  $\overline{AC}$  then  $\triangle ABD \cong \triangle CBD$ .

- (A) SSS (Side Side Side)
- (B) HL (Hypotenuse Leg)
- (C) SAS (Side Angle Side)
- (D) ASA (Angle Side Angle)
- (E) AAS (Angle Angle Side)
- (F) CPCTC (Corresponding Parts of Congruent Triangles are Congruent)



Check if  $\triangle ABC \cong \triangle DEF$  by SSS.



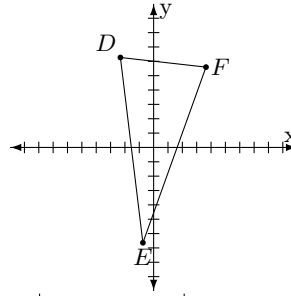
	$x$	$y$
A	6.68005	-0.05874
B	-5.94219	3.05237
C	3.93854	-5.39579

(7)  =  $AB$ .

(8)  =  $BC$ .

(9)  =  $AC$ .

Round answers to 2 decimals.



	$x$	$y$
D	-2.31386	6.26679
E	-0.74688	-6.63843
F	3.64852	5.59597

(10)  =  $DE$ .

(11)  =  $EF$ .

(12)  =  $DF$ .

name

date

period

Batch 505f32e9

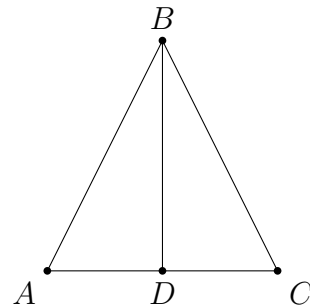
# Congruent Triangles

Version 8

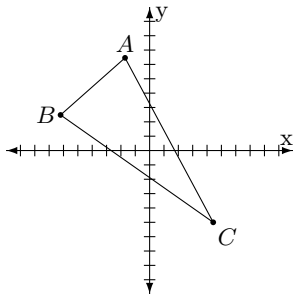
Match the theorem to the method of proof.

- (1)  If  $\overline{BD}$  is a perpendicular bisector to  $\overline{AC}$  then  $\triangle ABD \cong \triangle CBD$ .
- (2)  If  $\angle A \cong \angle C$  and  $\overline{BD}$  bisects  $\angle B$  then  $\triangle ABD \cong \triangle CBD$ .
- (3)  If  $\overline{BD}$  bisects  $\angle B$  and  $\overline{BD} \perp \overline{AC}$  then  $\triangle ABD \cong \triangle CBD$ .
- (4)  If  $\overline{AB} \cong \overline{BC}$  and  $\overline{BD} \perp \overline{AC}$  then  $\triangle ABD \cong \triangle CBD$ .
- (5)  If  $\overline{AB} \cong \overline{BC}$  and  $\overline{BD}$  bisects  $\overline{AC}$  then  $\triangle ABD \cong \triangle CBD$ .
- (6)  If  $\triangle ABD \cong \triangle CBD$  then  $\overline{BD}$  is a perpendicular bisector to  $\overline{AC}$ .

- (A) ASA (Angle Side Angle)  
 (B) AAS (Angle Angle Side)  
 (C) CPCTC (Corresponding Parts of Congruent Triangles are Congruent)  
 (D) SAS (Side Angle Side)  
 (E) HL (Hypotenuse Leg)  
 (F) SSS (Side Side Side)

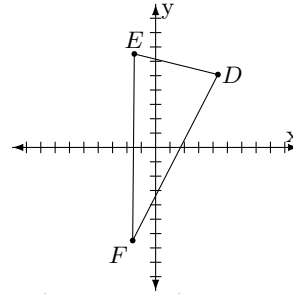


Check if  $\triangle ABC \cong \triangle DEF$  by SSS.



	$x$	$y$
A	-1.71251	6.45708
B	-6.20358	2.47834
C	4.42987	-5.00029

Round answers to 2 decimals.



	$x$	$y$
D	4.34125	5.07741
E	-1.4844	6.5133
F	-1.5987	-6.48619

(7)  =  $AB$ .

(10)  =  $DE$ .

(8)  =  $BC$ .

(11)  =  $EF$ .

(9)  =  $AC$ .

(12)  =  $DF$ .



name

date

period

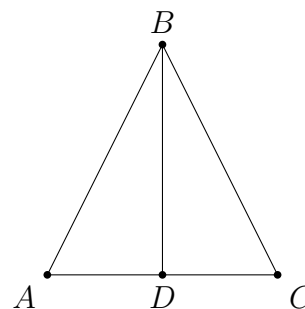
Batch 505f32e9

# Congruent Triangles

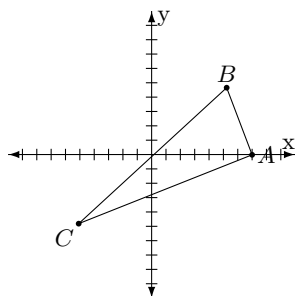
Version 9

Match the theorem to the method of proof.

- (1)  If  $\triangle ABD \cong \triangle CBD$  then  $\overline{BD}$  is a perpendicular bisector to  $\overline{AC}$ .
- (2)  If  $\overline{AB} \cong \overline{BC}$  and  $\overline{BD} \perp \overline{AC}$  then  $\triangle ABD \cong \triangle CBD$ .
- (3)  If  $\overline{BD}$  bisects  $\angle B$  and  $\overline{BD} \perp \overline{AC}$  then  $\triangle ABD \cong \triangle CBD$ .
- (4)  If  $\overline{AB} \cong \overline{BC}$  and  $\overline{BD}$  bisects  $\overline{AC}$  then  $\triangle ABD \cong \triangle CBD$ .
- (5)  If  $\angle A \cong \angle C$  and  $\overline{BD}$  bisects  $\angle B$  then  $\triangle ABD \cong \triangle CBD$ .
- (6)  If  $\overline{BD}$  is a perpendicular bisector to  $\overline{AC}$  then  $\triangle ABD \cong \triangle CBD$ .
- (A) SSS (Side Side Side)  
 (B) ASA (Angle Side Angle)  
 (C) SAS (Side Angle Side)  
 (D) CPCTC (Corresponding Parts of Congruent Triangles are Congruent)  
 (E) HL (Hypotenuse Leg)  
 (F) AAS (Angle Angle Side)

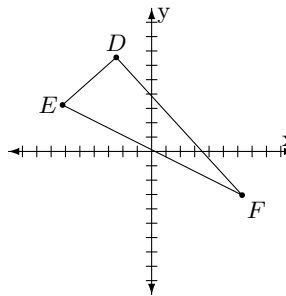


Check if  $\triangle ABC \cong \triangle DEF$  by SSS.



	$x$	$y$
A	7.0008	-0.0187
B	5.22778	4.65639
C	-5.08205	-4.81502

Round answers to 2 decimals.



	$x$	$y$
D	-2.46504	6.55249
E	-6.20759	3.23688
F	6.30424	-3.04437

- (7)  =  $AB$ .
- (8)  =  $BC$ .
- (9)  =  $AC$ .

- (10)  =  $DE$ .
- (11)  =  $EF$ .
- (12)  =  $DF$ .

name

date

period

Batch 505f32e9

# Congruent Triangles

Version 10

Match the theorem to the method of proof.

(1)  If  $\overline{BD}$  bisects  $\angle B$  and  $\overline{BD} \perp \overline{AC}$  then  $\triangle ABD \cong \triangle CBD$ .

(2)  If  $\angle A \cong \angle C$  and  $\overline{BD}$  bisects  $\angle B$  then  $\triangle ABD \cong \triangle CBD$ .

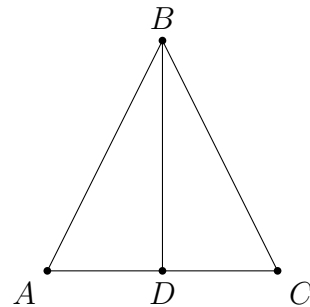
(3)  If  $\overline{AB} \cong \overline{BC}$  and  $\overline{BD}$  bisects  $\overline{AC}$  then  $\triangle ABD \cong \triangle CBD$ .

(4)  If  $\triangle ABD \cong \triangle CBD$  then  $\overline{BD}$  is a perpendicular bisector to  $\overline{AC}$ .

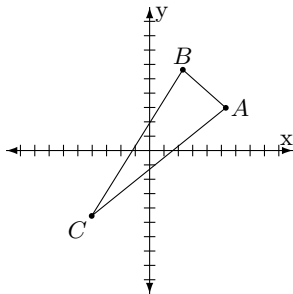
(5)  If  $\overline{BD}$  is a perpendicular bisector to  $\overline{AC}$  then  $\triangle ABD \cong \triangle CBD$ .

(6)  If  $\overline{AB} \cong \overline{BC}$  and  $\overline{BD} \perp \overline{AC}$  then  $\triangle ABD \cong \triangle CBD$ .

- (A) SAS (Side Angle Side)
- (B) AAS (Angle Angle Side)
- (C) HL (Hypotenuse Leg)
- (D) SSS (Side Side Side)
- (E) CPCTC (Corresponding Parts of Congruent Triangles are Congruent)
- (F) ASA (Angle Side Angle)



Check if  $\triangle ABC \cong \triangle DEF$  by SSS.



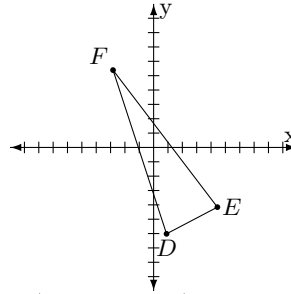
	$x$	$y$
A	5.30802	2.97548
B	2.31398	5.62797
C	-4.03517	-4.55477

(7)  =  $AB$ .

(8)  =  $BC$ .

(9)  =  $AC$ .

Round answers to 2 decimals.



	$x$	$y$
D	0.89987	-6.01821
E	4.4417	-4.15931
F	-2.82789	5.3881

(10)  =  $DE$ .

(11)  =  $EF$ .

(12)  =  $DF$ .

name

date

period

Batch 505f32e9

# Congruent Triangles

Version 11

Match the theorem to the method of proof.

(1)  If  $\overline{AB} \cong \overline{BC}$  and  $\overline{BD}$  bisects  $\overline{AC}$  then  $\triangle ABD \cong \triangle CBD$ .

(2)  If  $\triangle ABD \cong \triangle CBD$  then  $\overline{BD}$  is a perpendicular bisector to  $\overline{AC}$ .

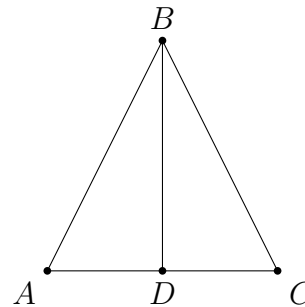
(3)  If  $\overline{AB} \cong \overline{BC}$  and  $\overline{BD} \perp \overline{AC}$  then  $\triangle ABD \cong \triangle CBD$ .

(4)  If  $\overline{BD}$  bisects  $\angle B$  and  $\overline{BD} \perp \overline{AC}$  then  $\triangle ABD \cong \triangle CBD$ .

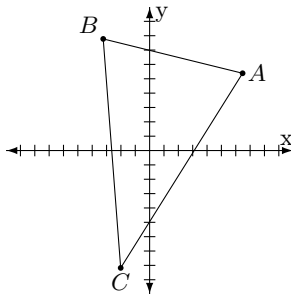
(5)  If  $\angle A \cong \angle C$  and  $\overline{BD}$  bisects  $\angle B$  then  $\triangle ABD \cong \triangle CBD$ .

(6)  If  $\overline{BD}$  is a perpendicular bisector to  $\overline{AC}$  then  $\triangle ABD \cong \triangle CBD$ .

- (A) HL (Hypotenuse Leg)
- (B) AAS (Angle Angle Side)
- (C) CPCTC (Corresponding Parts of Congruent Triangles are Congruent)
- (D) SAS (Side Angle Side)
- (E) ASA (Angle Side Angle)
- (F) SSS (Side Side Side)

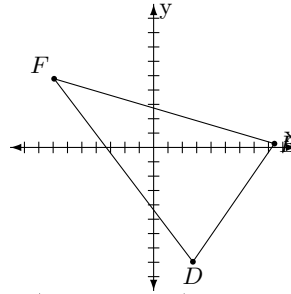


Check if  $\triangle ABC \cong \triangle DEF$  by SSS.



	$x$	$y$
A	6.47653	5.3834
B	-3.23289	7.77656
C	-2.01546	-8.17706

Round answers to 2 decimals.



	$x$	$y$
D	2.73696	-7.96464
E	8.41761	0.2652
F	-6.93099	4.78412

(7)  =  $AB$ .

(8)  =  $BC$ .

(9)  =  $AC$ .

(10)  =  $DE$ .

(11)  =  $EF$ .

(12)  =  $DF$ .

name

date

period

Batch 505f32e9

# Congruent Triangles

Version 12

Match the theorem to the method of proof.

(1)  If  $\overline{AB} \cong \overline{BC}$  and  $\overline{BD}$  bisects  $\overline{AC}$  then  $\triangle ABD \cong \triangle CBD$ .

(2)  If  $\overline{AB} \cong \overline{BC}$  and  $\overline{BD} \perp \overline{AC}$  then  $\triangle ABD \cong \triangle CBD$ .

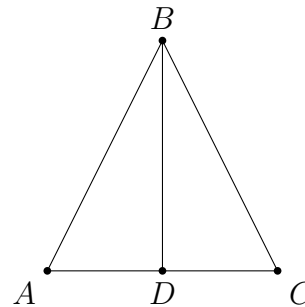
(3)  If  $\angle A \cong \angle C$  and  $\overline{BD}$  bisects  $\angle B$  then  $\triangle ABD \cong \triangle CBD$ .

(4)  If  $\triangle ABD \cong \triangle CBD$  then  $\overline{BD}$  is a perpendicular bisector to  $\overline{AC}$ .

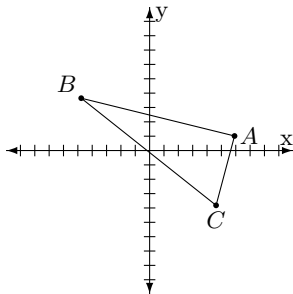
(5)  If  $\overline{BD}$  bisects  $\angle B$  and  $\overline{BD} \perp \overline{AC}$  then  $\triangle ABD \cong \triangle CBD$ .

(6)  If  $\overline{BD}$  is a perpendicular bisector to  $\overline{AC}$  then  $\triangle ABD \cong \triangle CBD$ .

- (A) SSS (Side Side Side)
- (B) ASA (Angle Side Angle)
- (C) AAS (Angle Angle Side)
- (D) CPCTC (Corresponding Parts of Congruent Triangles are Congruent)
- (E) SAS (Side Angle Side)
- (F) HL (Hypotenuse Leg)

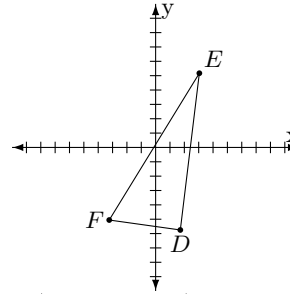


Check if  $\triangle ABC \cong \triangle DEF$  by SSS.



	$x$	$y$
A	5.91463	1.01441
B	-4.76573	3.64688
C	4.62998	-3.81774

Round answers to 2 decimals.



	$x$	$y$
D	1.71994	-5.74923
E	3.04585	5.17056
F	-3.23182	-5.0564

(7)  =  $AB$ .

(8)  =  $BC$ .

(9)  =  $AC$ .

(10)  =  $DE$ .

(11)  =  $EF$ .

(12)  =  $DF$ .

name

date

period

Batch 505f32e9

# Congruent Triangles

Version 13

Match the theorem to the method of proof.

(1)  If  $\angle A \cong \angle C$  and  $\overline{BD}$  bisects  $\angle B$  then  $\triangle ABD \cong \triangle CBD$ .

(2)  If  $\triangle ABD \cong \triangle CBD$  then  $\overline{BD}$  is a perpendicular bisector to  $\overline{AC}$ .

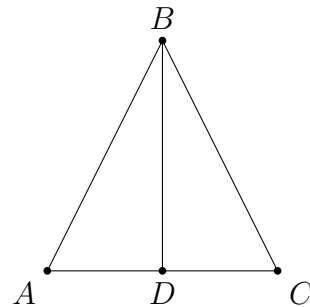
(3)  If  $\overline{BD}$  bisects  $\angle B$  and  $\overline{BD} \perp \overline{AC}$  then  $\triangle ABD \cong \triangle CBD$ .

(4)  If  $\overline{AB} \cong \overline{BC}$  and  $\overline{BD}$  bisects  $\overline{AC}$  then  $\triangle ABD \cong \triangle CBD$ .

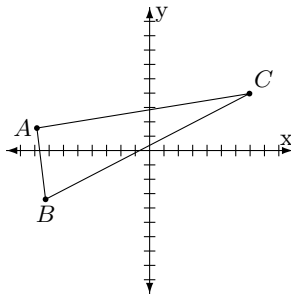
(5)  If  $\overline{BD}$  is a perpendicular bisector to  $\overline{AC}$  then  $\triangle ABD \cong \triangle CBD$ .

(6)  If  $\overline{AB} \cong \overline{BC}$  and  $\overline{BD} \perp \overline{AC}$  then  $\triangle ABD \cong \triangle CBD$ .

- (A) HL (Hypotenuse Leg)
- (B) CPCTC (Corresponding Parts of Congruent Triangles are Congruent)
- (C) AAS (Angle Angle Side)
- (D) SSS (Side Side Side)
- (E) ASA (Angle Side Angle)
- (F) SAS (Side Angle Side)



Check if  $\triangle ABC \cong \triangle DEF$  by SSS.



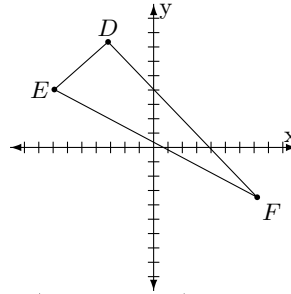
	$x$	$y$
A	-7.85197	1.56496
B	-7.24929	-3.39858
C	6.95442	3.96719

(7)  =  $AB$ .

(8)  =  $BC$ .

(9)  =  $AC$ .

Round answers to 2 decimals.



	$x$	$y$
D	-3.17249	7.35104
E	-6.91505	4.03543
F	7.21549	-3.46976

(10)  =  $DE$ .

(11)  =  $EF$ .

(12)  =  $DF$ .

name

date

period

Batch 505f32e9

# Congruent Triangles

Version 14

Match the theorem to the method of proof.

(1)  If  $\overline{AB} \cong \overline{BC}$  and  $\overline{BD}$  bisects  $\overline{AC}$  then  $\triangle ABD \cong \triangle CBD$ .

(2)  If  $\overline{BD}$  bisects  $\angle B$  and  $\overline{BD} \perp \overline{AC}$  then  $\triangle ABD \cong \triangle CBD$ .

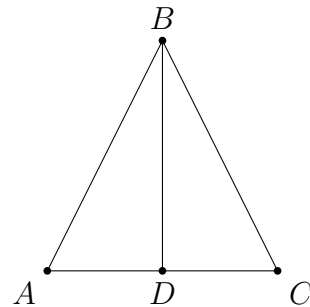
(3)  If  $\overline{AB} \cong \overline{BC}$  and  $\overline{BD} \perp \overline{AC}$  then  $\triangle ABD \cong \triangle CBD$ .

(4)  If  $\angle A \cong \angle C$  and  $\overline{BD}$  bisects  $\angle B$  then  $\triangle ABD \cong \triangle CBD$ .

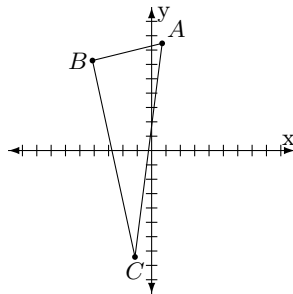
(5)  If  $\triangle ABD \cong \triangle CBD$  then  $\overline{BD}$  is a perpendicular bisector to  $\overline{AC}$ .

(6)  If  $\overline{BD}$  is a perpendicular bisector to  $\overline{AC}$  then  $\triangle ABD \cong \triangle CBD$ .

- (A) AAS (Angle Angle Side)
- (B) SSS (Side Side Side)
- (C) SAS (Side Angle Side)
- (D) HL (Hypotenuse Leg)
- (E) ASA (Angle Side Angle)
- (F) CPCTC (Corresponding Parts of Congruent Triangles are Congruent)



Check if  $\triangle ABC \cong \triangle DEF$  by SSS.



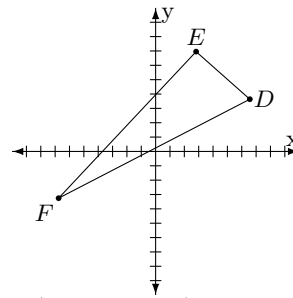
	$x$	$y$
A	0.73436	7.46704
B	-4.12035	6.27046
C	-1.15967	-7.4129

(7)  =  $AB$ .

(8)  =  $BC$ .

(9)  =  $AC$ .

Round answers to 2 decimals.



	$x$	$y$
D	6.56242	3.6374
E	2.81986	6.95301
F	-6.75947	-3.25661

(10)  =  $DE$ .

(11)  =  $EF$ .

(12)  =  $DF$ .

name

date

period

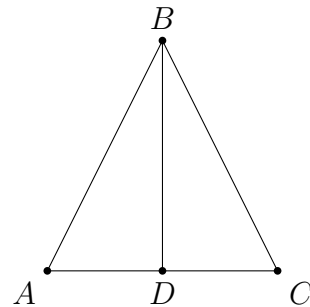
Batch 505f32e9

# Congruent Triangles

Version 15

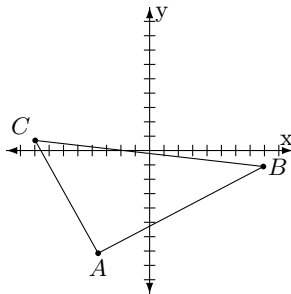
Match the theorem to the method of proof.

- (1)  If  $\angle A \cong \angle C$  and  $\overline{BD}$  bisects  $\angle B$  then  $\triangle ABD \cong \triangle CBD$ .
- (2)  If  $\overline{BD}$  bisects  $\angle B$  and  $\overline{BD} \perp \overline{AC}$  then  $\triangle ABD \cong \triangle CBD$ .
- (3)  If  $\overline{BD}$  is a perpendicular bisector to  $\overline{AC}$  then  $\triangle ABD \cong \triangle CBD$ .
- (4)  If  $\triangle ABD \cong \triangle CBD$  then  $\overline{BD}$  is a perpendicular bisector to  $\overline{AC}$ .
- (5)  If  $\overline{AB} \cong \overline{BC}$  and  $\overline{BD} \perp \overline{AC}$  then  $\triangle ABD \cong \triangle CBD$ .
- (6)  If  $\overline{AB} \cong \overline{BC}$  and  $\overline{BD}$  bisects  $\overline{AC}$  then  $\triangle ABD \cong \triangle CBD$ .
- (A) SAS (Side Angle Side)  
 (B) CPCTC (Corresponding Parts of Congruent Triangles are Congruent)  
 (C) ASA (Angle Side Angle)  
 (D) AAS (Angle Angle Side)  
 (E) HL (Hypotenuse Leg)  
 (F) SSS (Side Side Side)

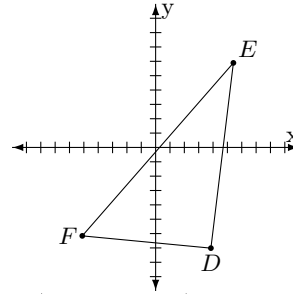


Check if  $\triangle ABC \cong \triangle DEF$  by SSS.

Round answers to 2 decimals.



	$x$	$y$
A	-3.58604	-7.15419
B	7.92489	-1.11279
C	-7.97151	0.70505



	$x$	$y$
D	3.85068	-7.0153
E	5.41765	5.88992
F	-5.10858	-6.15991

(7)  =  $AB$ .

(10)  =  $DE$ .

(8)  =  $BC$ .

(11)  =  $EF$ .

(9)  =  $AC$ .

(12)  =  $DF$ .

name

date

period

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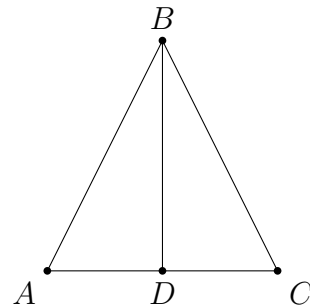
# Congruent Triangles

Version 16

Match the theorem to the method of proof.

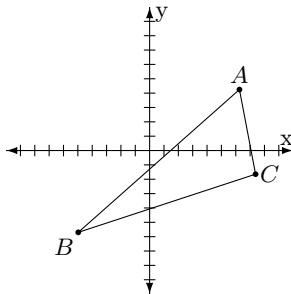
- (1)  If  $\angle A \cong \angle C$  and  $\overline{BD}$  bisects  $\angle B$  then  $\triangle ABD \cong \triangle CBD$ .
- (2)  If  $\overline{BD}$  bisects  $\angle B$  and  $\overline{BD} \perp \overline{AC}$  then  $\triangle ABD \cong \triangle CBD$ .
- (3)  If  $\overline{AB} \cong \overline{BC}$  and  $\overline{BD} \perp \overline{AC}$  then  $\triangle ABD \cong \triangle CBD$ .
- (4)  If  $\triangle ABD \cong \triangle CBD$  then  $\overline{BD}$  is a perpendicular bisector to  $\overline{AC}$ .
- (5)  If  $\overline{BD}$  is a perpendicular bisector to  $\overline{AC}$  then  $\triangle ABD \cong \triangle CBD$ .
- (6)  If  $\overline{AB} \cong \overline{BC}$  and  $\overline{BD}$  bisects  $\overline{AC}$  then  $\triangle ABD \cong \triangle CBD$ .

- (A) AAS (Angle Angle Side)  
 (B) HL (Hypotenuse Leg)  
 (C) CPCTC (Corresponding Parts of Congruent Triangles are Congruent)  
 (D) ASA (Angle Side Angle)  
 (E) SSS (Side Side Side)  
 (F) SAS (Side Angle Side)

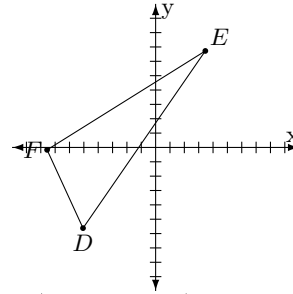


Check if  $\triangle ABC \cong \triangle DEF$  by SSS.

Round answers to 2 decimals.



	$x$	$y$
A	6.25675	4.24771
B	-4.97091	-5.69913
C	7.3811	-1.646



	$x$	$y$
D	-5.0584	-5.62162
E	3.46257	6.72314
F	-7.56054	-0.16824

(7)  =  $AB$ .

(10)  =  $DE$ .

(8)  =  $BC$ .

(11)  =  $EF$ .

(9)  =  $AC$ .

(12)  =  $DF$ .



name

date

period

Batch 505f32e9

# Congruent Triangles

Version 17

Match the theorem to the method of proof.

(1)  If  $\overline{AB} \cong \overline{BC}$  and  $\overline{BD}$  bisects  $\overline{AC}$  then  $\triangle ABD \cong \triangle CBD$ .

(2)  If  $\angle A \cong \angle C$  and  $\overline{BD}$  bisects  $\angle B$  then  $\triangle ABD \cong \triangle CBD$ .

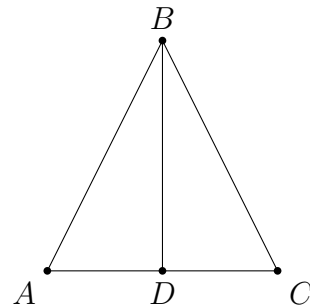
(3)  If  $\overline{AB} \cong \overline{BC}$  and  $\overline{BD} \perp \overline{AC}$  then  $\triangle ABD \cong \triangle CBD$ .

(4)  If  $\overline{BD}$  bisects  $\angle B$  and  $\overline{BD} \perp \overline{AC}$  then  $\triangle ABD \cong \triangle CBD$ .

(5)  If  $\overline{BD}$  is a perpendicular bisector to  $\overline{AC}$  then  $\triangle ABD \cong \triangle CBD$ .

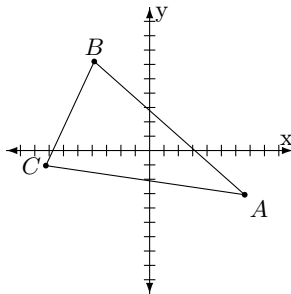
(6)  If  $\triangle ABD \cong \triangle CBD$  then  $\overline{BD}$  is a perpendicular bisector to  $\overline{AC}$ .

- (A) HL (Hypotenuse Leg)
- (B) CPCTC (Corresponding Parts of Congruent Triangles are Congruent)
- (C) SSS (Side Side Side)
- (D) ASA (Angle Side Angle)
- (E) AAS (Angle Angle Side)
- (F) SAS (Side Angle Side)



Check if  $\triangle ABC \cong \triangle DEF$  by SSS.

Round answers to 2 decimals.

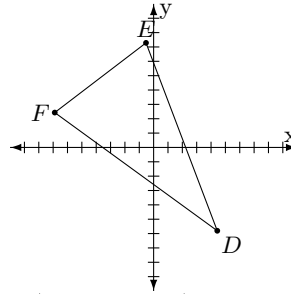


	$x$	$y$
A	6.62351	-3.07972
B	-3.85564	6.204
C	-7.2286	-1.05018

(7)  =  $AB$ .

(8)  =  $BC$ .

(9)  =  $AC$ .



	$x$	$y$
D	4.43361	-5.80505
E	-0.53086	7.28517
F	-6.88865	2.42941

(10)  =  $DE$ .

(11)  =  $EF$ .

(12)  =  $DF$ .

name

date

period

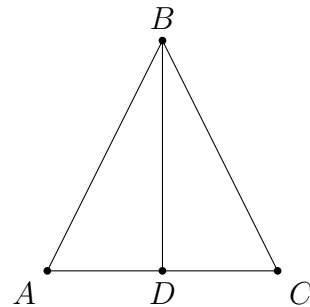
Batch 505f32e9

# Congruent Triangles

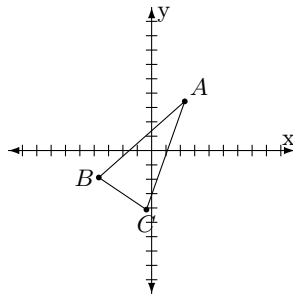
Version 18

Match the theorem to the method of proof.

- (1)  If  $\angle A \cong \angle C$  and  $\overline{BD}$  bisects  $\angle B$  then  $\triangle ABD \cong \triangle CBD$ .
- (2)  If  $\overline{AB} \cong \overline{BC}$  and  $\overline{BD} \perp \overline{AC}$  then  $\triangle ABD \cong \triangle CBD$ .
- (3)  If  $\triangle ABD \cong \triangle CBD$  then  $\overline{BD}$  is a perpendicular bisector to  $\overline{AC}$ .
- (4)  If  $\overline{AB} \cong \overline{BC}$  and  $\overline{BD}$  bisects  $\overline{AC}$  then  $\triangle ABD \cong \triangle CBD$ .
- (5)  If  $\overline{BD}$  is a perpendicular bisector to  $\overline{AC}$  then  $\triangle ABD \cong \triangle CBD$ .
- (6)  If  $\overline{BD}$  bisects  $\angle B$  and  $\overline{BD} \perp \overline{AC}$  then  $\triangle ABD \cong \triangle CBD$ .
- (A) AAS (Angle Angle Side)  
 (B) ASA (Angle Side Angle)  
 (C) SSS (Side Side Side)  
 (D) HL (Hypotenuse Leg)  
 (E) CPCTC (Corresponding Parts of Congruent Triangles are Congruent)  
 (F) SAS (Side Angle Side)

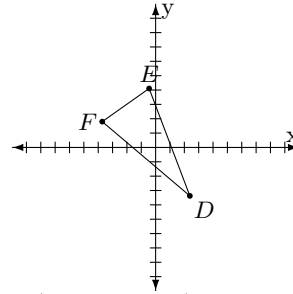


Check if  $\triangle ABC \cong \triangle DEF$  by SSS.



	$x$	$y$
A	2.30917	3.42555
B	-3.67891	-1.87943
C	-0.36214	-4.11528

Round answers to 2 decimals.



	$x$	$y$
D	2.3841	-3.37383
E	-0.45274	4.1063
F	-3.71944	1.7979

(7)  =  $AB$ .

(10)  =  $DE$ .

(8)  =  $BC$ .

(11)  =  $EF$ .

(9)  =  $AC$ .

(12)  =  $DF$ .

name

date

period

Batch 505f32e9

# Congruent Triangles

Version 19

Match the theorem to the method of proof.

(1)  If  $\overline{BD}$  bisects  $\angle B$  and  $\overline{BD} \perp \overline{AC}$  then  $\triangle ABD \cong \triangle CBD$ .

(2)  If  $\overline{BD}$  is a perpendicular bisector to  $\overline{AC}$  then  $\triangle ABD \cong \triangle CBD$ .

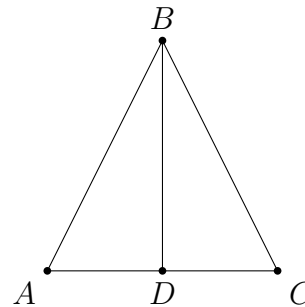
(3)  If  $\angle A \cong \angle C$  and  $\overline{BD}$  bisects  $\angle B$  then  $\triangle ABD \cong \triangle CBD$ .

(4)  If  $\overline{AB} \cong \overline{BC}$  and  $\overline{BD} \perp \overline{AC}$  then  $\triangle ABD \cong \triangle CBD$ .

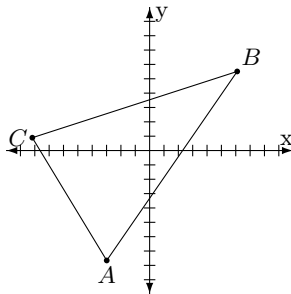
(5)  If  $\overline{AB} \cong \overline{BC}$  and  $\overline{BD}$  bisects  $\overline{AC}$  then  $\triangle ABD \cong \triangle CBD$ .

(6)  If  $\triangle ABD \cong \triangle CBD$  then  $\overline{BD}$  is a perpendicular bisector to  $\overline{AC}$ .

- (A) AAS (Angle Angle Side)
- (B) SSS (Side Side Side)
- (C) SAS (Side Angle Side)
- (D) ASA (Angle Side Angle)
- (E) CPCTC (Corresponding Parts of Congruent Triangles are Congruent)
- (F) HL (Hypotenuse Leg)



Check if  $\triangle ABC \cong \triangle DEF$  by SSS.



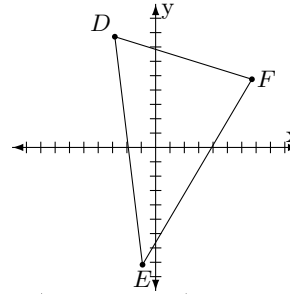
	$x$	$y$
A	-2.98851	-7.6579
B	6.10052	5.50984
C	-8.17162	0.89402

(7)  =  $AB$ .

(8)  =  $BC$ .

(9)  =  $AC$ .

Round answers to 2 decimals.



	$x$	$y$
D	-2.8412	7.71377
E	-0.91261	-8.16957
F	6.70939	4.74961

(10)  =  $DE$ .

(11)  =  $EF$ .

(12)  =  $DF$ .

name

date

period

Batch 505f32e9

# Congruent Triangles

Version 20

Match the theorem to the method of proof.

(1)  If  $\overline{AB} \cong \overline{BC}$  and  $\overline{BD}$  bisects  $\overline{AC}$  then  $\triangle ABD \cong \triangle CBD$ .

(2)  If  $\overline{AB} \cong \overline{BC}$  and  $\overline{BD} \perp \overline{AC}$  then  $\triangle ABD \cong \triangle CBD$ .

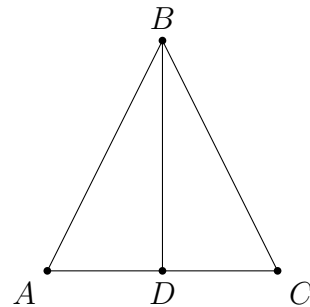
(3)  If  $\triangle ABD \cong \triangle CBD$  then  $\overline{BD}$  is a perpendicular bisector to  $\overline{AC}$ .

(4)  If  $\overline{BD}$  is a perpendicular bisector to  $\overline{AC}$  then  $\triangle ABD \cong \triangle CBD$ .

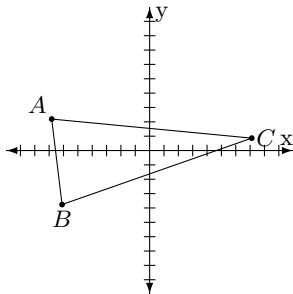
(5)  If  $\angle A \cong \angle C$  and  $\overline{BD}$  bisects  $\angle B$  then  $\triangle ABD \cong \triangle CBD$ .

(6)  If  $\overline{BD}$  bisects  $\angle B$  and  $\overline{BD} \perp \overline{AC}$  then  $\triangle ABD \cong \triangle CBD$ .

- (A) HL (Hypotenuse Leg)
- (B) ASA (Angle Side Angle)
- (C) AAS (Angle Angle Side)
- (D) SSS (Side Side Side)
- (E) SAS (Side Angle Side)
- (F) CPCTC (Corresponding Parts of Congruent Triangles are Congruent)



Check if  $\triangle ABC \cong \triangle DEF$  by SSS.



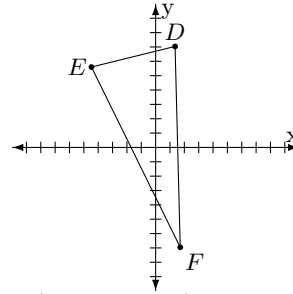
	$x$	$y$
A	-6.82248	2.19363
B	-6.09926	-3.76262
C	7.11422	0.86382

(7)  =  $AB$ .

(8)  =  $BC$ .

(9)  =  $AC$ .

Round answers to 2 decimals.



	$x$	$y$
D	1.35528	7.03715
E	-4.47037	5.60126
F	1.71505	-6.95823

(10)  =  $DE$ .

(11)  =  $EF$ .

(12)  =  $DF$ .

name

date

period

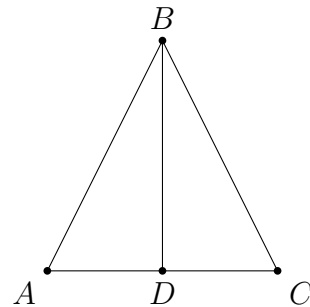
Batch 505f32e9

# Congruent Triangles

Version 21

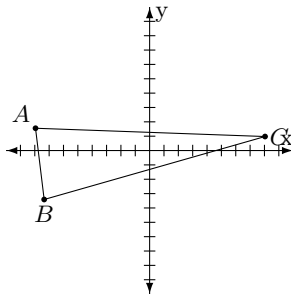
Match the theorem to the method of proof.

- (1)  If  $\overline{AB} \cong \overline{BC}$  and  $\overline{BD} \perp \overline{AC}$  then  $\triangle ABD \cong \triangle CBD$ .
- (2)  If  $\overline{AB} \cong \overline{BC}$  and  $\overline{BD}$  bisects  $\overline{AC}$  then  $\triangle ABD \cong \triangle CBD$ .
- (3)  If  $\overline{BD}$  is a perpendicular bisector to  $\overline{AC}$  then  $\triangle ABD \cong \triangle CBD$ .
- (4)  If  $\overline{BD}$  bisects  $\angle B$  and  $\overline{BD} \perp \overline{AC}$  then  $\triangle ABD \cong \triangle CBD$ .
- (5)  If  $\triangle ABD \cong \triangle CBD$  then  $\overline{BD}$  is a perpendicular bisector to  $\overline{AC}$ .
- (6)  If  $\angle A \cong \angle C$  and  $\overline{BD}$  bisects  $\angle B$  then  $\triangle ABD \cong \triangle CBD$ .
- (A) AAS (Angle Angle Side)  
 (B) ASA (Angle Side Angle)  
 (C) HL (Hypotenuse Leg)  
 (D) SSS (Side Side Side)  
 (E) SAS (Side Angle Side)  
 (F) CPCTC (Corresponding Parts of Congruent Triangles are Congruent)

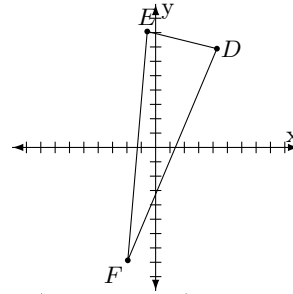


Check if  $\triangle ABC \cong \triangle DEF$  by SSS.

Round answers to 2 decimals.



	$x$	$y$
A	-7.94917	1.55316
B	-7.34649	-3.41039
C	8.04043	0.97628



	$x$	$y$
D	4.27104	6.88185
E	-0.58367	8.07842
F	-1.93833	-7.86413

(7)  =  $AB$ .

(10)  =  $DE$ .

(8)  =  $BC$ .

(11)  =  $EF$ .

(9)  =  $AC$ .

(12)  =  $DF$ .

name

date

period

Batch 505f32e9

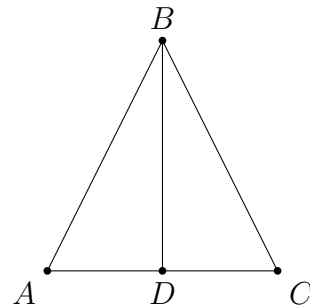
# Congruent Triangles

Version 22

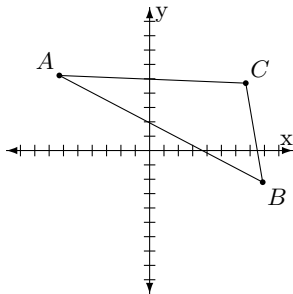
Match the theorem to the method of proof.

- (1)  If  $\angle A \cong \angle C$  and  $\overline{BD}$  bisects  $\angle B$  then  $\triangle ABD \cong \triangle CBD$ .
- (2)  If  $\overline{BD}$  is a perpendicular bisector to  $\overline{AC}$  then  $\triangle ABD \cong \triangle CBD$ .
- (3)  If  $\overline{AB} \cong \overline{BC}$  and  $\overline{BD} \perp \overline{AC}$  then  $\triangle ABD \cong \triangle CBD$ .
- (4)  If  $\overline{BD}$  bisects  $\angle B$  and  $\overline{BD} \perp \overline{AC}$  then  $\triangle ABD \cong \triangle CBD$ .
- (5)  If  $\triangle ABD \cong \triangle CBD$  then  $\overline{BD}$  is a perpendicular bisector to  $\overline{AC}$ .
- (6)  If  $\overline{AB} \cong \overline{BC}$  and  $\overline{BD}$  bisects  $\overline{AC}$  then  $\triangle ABD \cong \triangle CBD$ .

- (A) SSS (Side Side Side)  
 (B) SAS (Side Angle Side)  
 (C) CPCTC (Corresponding Parts of Congruent Triangles are Congruent)  
 (D) HL (Hypotenuse Leg)  
 (E) AAS (Angle Angle Side)  
 (F) ASA (Angle Side Angle)



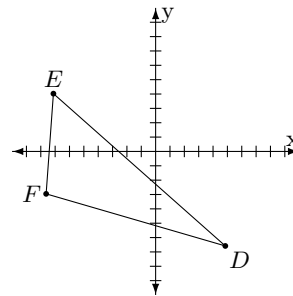
Check if  $\triangle ABC \cong \triangle DEF$  by SSS.



	$x$	$y$
A	-6.28991	5.23012
B	7.87738	-2.20545
C	6.69905	4.69466

- (7)  =  $AB$ .
- (8)  =  $BC$ .
- (9)  =  $AC$ .

Round answers to 2 decimals.



	$x$	$y$
D	4.85549	-6.58342
E	-7.12068	4.02655
F	-7.6279	-2.95505

- (10)  =  $DE$ .
- (11)  =  $EF$ .
- (12)  =  $DF$ .

name

date

period

Batch 505f32e9

# Congruent Triangles

Version 23

Match the theorem to the method of proof.

(1)  If  $\overline{AB} \cong \overline{BC}$  and  $\overline{BD}$  bisects  $\overline{AC}$  then  $\triangle ABD \cong \triangle CBD$ .

(2)  If  $\overline{BD}$  bisects  $\angle B$  and  $\overline{BD} \perp \overline{AC}$  then  $\triangle ABD \cong \triangle CBD$ .

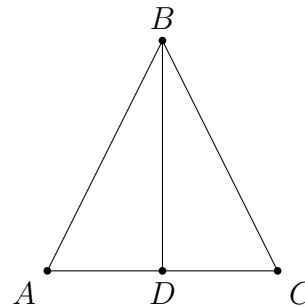
(3)  If  $\triangle ABD \cong \triangle CBD$  then  $\overline{BD}$  is a perpendicular bisector to  $\overline{AC}$ .

(4)  If  $\angle A \cong \angle C$  and  $\overline{BD}$  bisects  $\angle B$  then  $\triangle ABD \cong \triangle CBD$ .

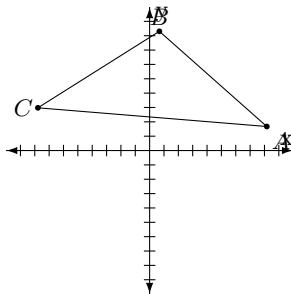
(5)  If  $\overline{BD}$  is a perpendicular bisector to  $\overline{AC}$  then  $\triangle ABD \cong \triangle CBD$ .

(6)  If  $\overline{AB} \cong \overline{BC}$  and  $\overline{BD} \perp \overline{AC}$  then  $\triangle ABD \cong \triangle CBD$ .

- (A) SAS (Side Angle Side)
- (B) AAS (Angle Angle Side)
- (C) HL (Hypotenuse Leg)
- (D) SSS (Side Side Side)
- (E) ASA (Angle Side Angle)
- (F) CPCTC (Corresponding Parts of Congruent Triangles are Congruent)



Check if  $\triangle ABC \cong \triangle DEF$  by SSS.



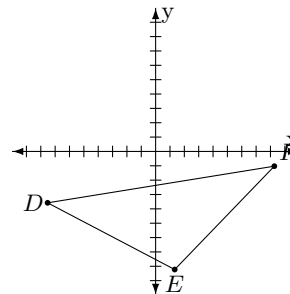
	$x$	$y$
A	8.16337	1.67446
B	0.67826	8.30568
C	-7.78354	2.97673

(7)  =  $AB$ .

(8)  =  $BC$ .

(9)  =  $AC$ .

Round answers to 2 decimals.



	$x$	$y$
D	-7.52543	-3.57942
E	1.32913	-8.22666
F	8.26974	-1.0275

(10)  =  $DE$ .

(11)  =  $EF$ .

(12)  =  $DF$ .

name

date

period

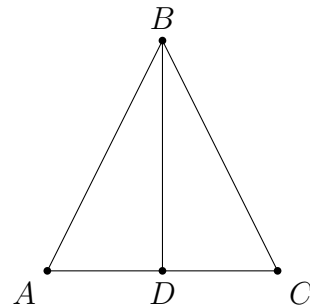
Batch 505f32e9

# Congruent Triangles

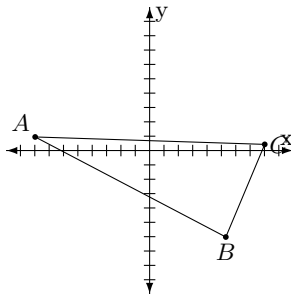
Version 24

Match the theorem to the method of proof.

- (1)  If  $\angle A \cong \angle C$  and  $\overline{BD}$  bisects  $\angle B$  then  $\triangle ABD \cong \triangle CBD$ .
- (2)  If  $\overline{AB} \cong \overline{BC}$  and  $\overline{BD}$  bisects  $\overline{AC}$  then  $\triangle ABD \cong \triangle CBD$ .
- (3)  If  $\overline{BD}$  is a perpendicular bisector to  $\overline{AC}$  then  $\triangle ABD \cong \triangle CBD$ .
- (4)  If  $\overline{BD}$  bisects  $\angle B$  and  $\overline{BD} \perp \overline{AC}$  then  $\triangle ABD \cong \triangle CBD$ .
- (5)  If  $\overline{AB} \cong \overline{BC}$  and  $\overline{BD} \perp \overline{AC}$  then  $\triangle ABD \cong \triangle CBD$ .
- (6)  If  $\triangle ABD \cong \triangle CBD$  then  $\overline{BD}$  is a perpendicular bisector to  $\overline{AC}$ .
- (A) SAS (Side Angle Side)  
 (B) CPCTC (Corresponding Parts of Congruent Triangles are Congruent)  
 (C) HL (Hypotenuse Leg)  
 (D) SSS (Side Side Side)  
 (E) AAS (Angle Angle Side)  
 (F) ASA (Angle Side Angle)

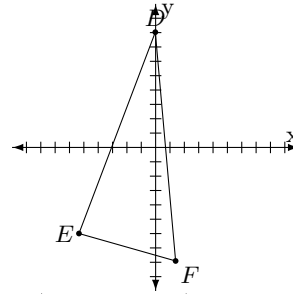


Check if  $\triangle ABC \cong \triangle DEF$  by SSS.



	$x$	$y$
A	-7.97361	0.9462
B	5.30824	-6.02464
C	8.01805	0.42957

Round answers to 2 decimals.



	$x$	$y$
D	-0.02181	8.02952
E	-5.34088	-5.99572
F	1.39291	-7.90781

(7)  =  $AB$ .

(10)  =  $DE$ .

(8)  =  $BC$ .

(11)  =  $EF$ .

(9)  =  $AC$ .

(12)  =  $DF$ .



name

date

period

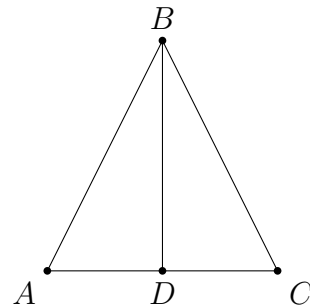
Batch 505f32e9

# Congruent Triangles

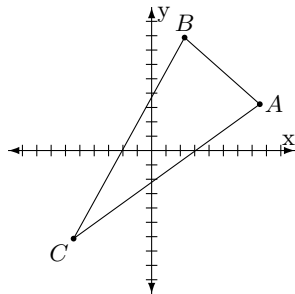
Version 25

Match the theorem to the method of proof.

- (1)  If  $\angle A \cong \angle C$  and  $\overline{BD}$  bisects  $\angle B$  then  $\triangle ABD \cong \triangle CBD$ .
- (2)  If  $\overline{BD}$  is a perpendicular bisector to  $\overline{AC}$  then  $\triangle ABD \cong \triangle CBD$ .
- (3)  If  $\triangle ABD \cong \triangle CBD$  then  $\overline{BD}$  is a perpendicular bisector to  $\overline{AC}$ .
- (4)  If  $\overline{AB} \cong \overline{BC}$  and  $\overline{BD}$  bisects  $\overline{AC}$  then  $\triangle ABD \cong \triangle CBD$ .
- (5)  If  $\overline{AB} \cong \overline{BC}$  and  $\overline{BD} \perp \overline{AC}$  then  $\triangle ABD \cong \triangle CBD$ .
- (6)  If  $\overline{BD}$  bisects  $\angle B$  and  $\overline{BD} \perp \overline{AC}$  then  $\triangle ABD \cong \triangle CBD$ .
- (A) SAS (Side Angle Side)  
 (B) AAS (Angle Angle Side)  
 (C) ASA (Angle Side Angle)  
 (D) HL (Hypotenuse Leg)  
 (E) SSS (Side Side Side)  
 (F) CPCTC (Corresponding Parts of Congruent Triangles are Congruent)

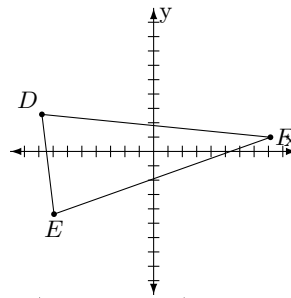


Check if  $\triangle ABC \cong \triangle DEF$  by SSS.



	$x$	$y$
A	7.53613	3.22848
B	2.29656	7.87034
C	-5.43665	-6.13671

Round answers to 2 decimals.



	$x$	$y$
D	-7.78176	2.58083
E	-6.938	-4.36813
F	8.13878	0.98823

(7)  =  $AB$ .

(10)  =  $DE$ .

(8)  =  $BC$ .

(11)  =  $EF$ .

(9)  =  $AC$ .

(12)  =  $DF$ .

Version 1	Version 2	Version 3	Version 4	Version 5	Version 6
(1) F	(1) E	(1) E	(1) E	(1) A	(1) E
(2) D	(2) F	(2) F	(2) A	(2) D	(2) A
(3) A	(3) B	(3) B	(3) D	(3) E	(3) C
(4) C	(4) A	(4) D	(4) C	(4) F	(4) F
(5) E	(5) D	(5) C	(5) F	(5) C	(5) B
(6) B	(6) C	(6) A	(6) B	(6) B	(6) D
(7) (10) 7	(7) (10) 10	(7) (10) 11	(7) (10) 13	(7) (10) 11	(7) (10) 6
(8) (11) 15	(8) (11) 7	(8) (11) 4	(8) (11) 11	(8) (11) 10	(8) (11) 15
(9) (12) 16	(9) (12) 11	(9) (12) 11	(9) (12) 14	(9) (12) 14	(9) (12) 13
Version 7	Version 8	Version 9	Version 10	Version 11	Version 12
(1) D	(1) D	(1) D	(1) F	(1) F	(1) A
(2) F	(2) B	(2) E	(2) B	(2) C	(2) F
(3) B	(3) A	(3) B	(3) D	(3) A	(3) C
(4) C	(4) E	(4) A	(4) E	(4) E	(4) D
(5) E	(5) F	(5) F	(5) A	(5) B	(5) B
(6) A	(6) C	(6) C	(6) C	(6) D	(6) E
(7) (10) 13	(7) (10) 6	(7) (10) 5	(7) (10) 4	(7) (10) 10	(7) (10) 11
(8) (11) 13	(8) (11) 13	(8) (11) 14	(8) (11) 12	(8) (11) 16	(8) (11) 12
(9) (12) 6	(9) (12) 13	(9) (12) 13	(9) (12) 12	(9) (12) 16	(9) (12) 5
Version 13	Version 14	Version 15	Version 16	Version 17	Version 18
(1) C	(1) B	(1) D	(1) A	(1) C	(1) A
(2) B	(2) E	(2) C	(2) D	(2) E	(2) D
(3) E	(3) D	(3) A	(3) B	(3) A	(3) E
(4) D	(4) A	(4) B	(4) C	(4) D	(4) C
(5) F	(5) F	(5) E	(5) F	(5) F	(5) F
(6) A	(6) C	(6) F	(6) E	(6) B	(6) B
(7) (10) 5	(7) (10) 5	(7) (10) 13	(7) (10) 15	(7) (10) 14	(7) (10) 8
(8) (11) 16	(8) (11) 14	(8) (11) 16	(8) (11) 13	(8) (11) 8	(8) (11) 4
(9) (12) 15	(9) (12) 15	(9) (12) 9	(9) (12) 6	(9) (12) 14	(9) (12) 8
Version 19	Version 20	Version 21	Version 22	Version 23	Version 24
(1) D	(1) D	(1) C	(1) E	(1) D	(1) E
(2) C	(2) A	(2) D	(2) B	(2) E	(2) D
(3) A	(3) F	(3) E	(3) D	(3) F	(3) A
(4) F	(4) E	(4) B	(4) F	(4) B	(4) F
(5) B	(5) C	(5) F	(5) C	(5) A	(5) C
(6) E	(6) B	(6) A	(6) A	(6) C	(6) B
(7) (10) 16	(7) (10) 6	(7) (10) 5	(7) (10) 16	(7) (10) 10	(7) (10) 15
(8) (11) 15	(8) (11) 14	(8) (11) 16	(8) (11) 7	(8) (11) 10	(8) (11) 7
(9) (12) 10	(9) (12) 14	(9) (12) 16	(9) (12) 13	(9) (12) 16	(9) (12) 16

Version 25

(1)	B	
(2)	A	
(3)	F	
(4)	E	
(5)	D	
(6)	C	
(7)	(10)	7
(8)	(11)	16
(9)	(12)	16