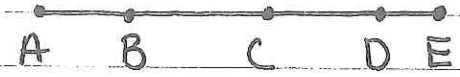
Finding Mistakes

Name: _____

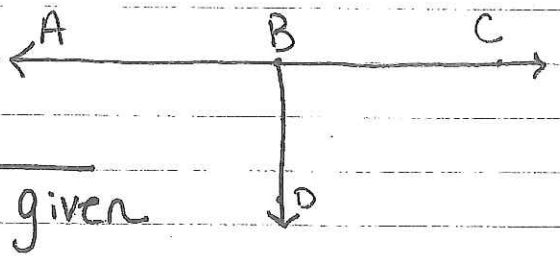
Directions: Below are proofs with errors in them. Use a red pen to find the mistakes or missing material from the argument.

1. Given: C is midpt of BD and AE
Prove: $AB \cong DE$



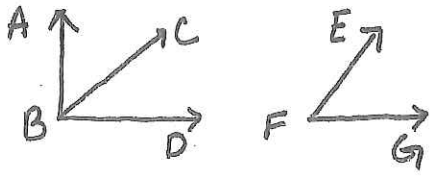
1. C is the midpt of BD and AE	1. given
2. $BC \cong CD$, $AC \cong CE$	2. def of midpt
3. $AB + BC = CD + DE$	3. Subs.
4. $AB \cong DE$	4. Subt.

2. Given: $\angle ABD \cong \angle CBD$
Prove: $AC \perp BD$



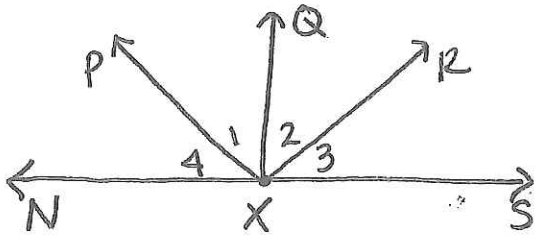
1. $\angle ABD \cong \angle CBD$	1. given
2. $\angle ABD + \angle CBD = 180°$	2. def of suppl.
3. $2\angle ABD = 180°$	3. Subs
4. $\angle ABD = 90°$	4. def of Right $\angle$
5. $AC + BD = 90°$	5. def of $\perp$
6. $AC \perp BD$	6. def of $\perp$

3.) Given: $AB \perp BD$
$\angle EFG$ and $\angle CBD$ are compl.
Prove: $\angle EFG \cong \angle ABC$



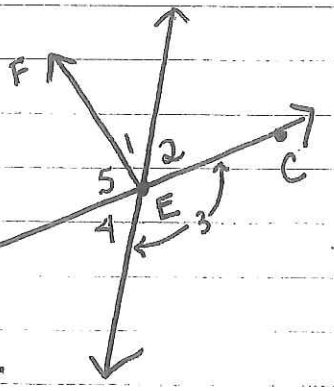
1. $AB \perp BD$	1. given
2. $\angle ABC + \angle CBD = 90°$	2. def of $\perp$
3. $\angle EFG + \angle CBD = \angle CBD + \angle ABC$	3. Subs
4. $\angle EFG \cong \angle ABC$	4. Subt.

4.) Given: $\angle QXS$ and $\angle QXN$ are Right angles, $\angle 1 \cong \angle 3$
Prove: $\angle 2 \cong \angle 4$



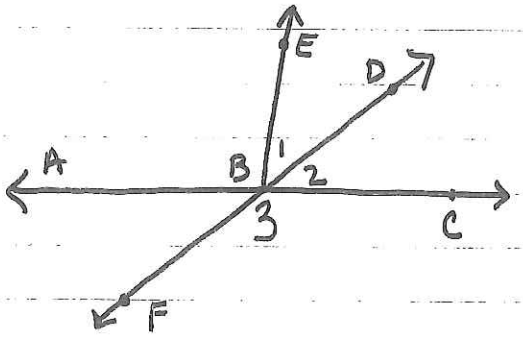
1. $\angle QXS$ and $\angle QXN$ are $90°$, $\angle 1 \cong \angle 3$	1. given
2. $\angle QXS = 90°, \angle QXN = 90°$	2. def of $\perp$
3. $90 = \angle 4 + \angle 1$, $90° = \angle 2 + \angle 3$	3. def of compl.
4. $\angle QXS \cong \angle QXN$	4. Subs
5. $\angle 4 + \angle 1 = \angle 2 + \angle 3$	5. Subs
6. $\angle 4 + \angle 1 = \angle 2 + \angle 1$	6. Subs
7. $\angle 4 \cong \angle 2$	7. Subs.

5.) Given: $\angle FEC$ is a Right $\angle$
Prove: $\angle 1$ and $\angle 4$ are compl.



1. $\angle FEC$ is a Right $\angle$	1. given
2. $\angle 1 + \angle 2 = 90°$	2. def of compl.
3. $\angle 2 \cong \angle 4$	3. vertical $\angle$s
4. $\angle 1 + \angle 4 = 90°$	4. def of compl.
5. $\angle 1$ and $\angle 4$ are $90°$	5. def of compl.

6.) Given: BD bisects $\angle EBC$
Prove: $\angle 1$ and $\angle 3$ are suppl.



1. BD bisects $\angle EBC$	1. given
2. $\angle 1 \cong \angle 2$	2. def of bisector
3. $\angle 2 + \angle 3 = 180°$	3. angle add.
4. $\angle 1 + \angle 3 = 180°$	4. subs
5. $\angle 1$ and $\angle 3$ are Suppl.	5. def of suppl.

Finding Mistakes

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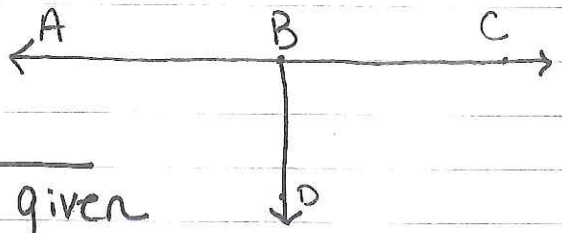
Directions: Below are proofs with errors in them. Use a red pen to find the mistakes or missing material from the argument.

1. Given: C is midpt of BD and AE
Prove: $AB \cong DE$

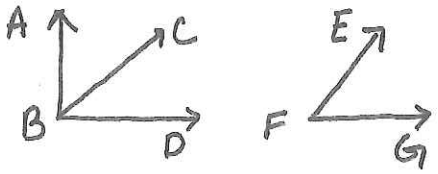
1. C is the midpt of BD and AE	1. given
2. $BC \cong CD$, $AC \cong CE$	2. def of midpt
2.5 $AC = AB + BC$, $CE = CD + DE$	2.5 Seg. add
3. $AB + BC = CD + DE$	3. Subs.
3.5. $AB + BC = BC + DE$	3.5 subs
4. $AB \cong DE$	4. subt.

2. Given: $\angle ABD \cong \angle CBD$
Prove: $AC \perp BD$



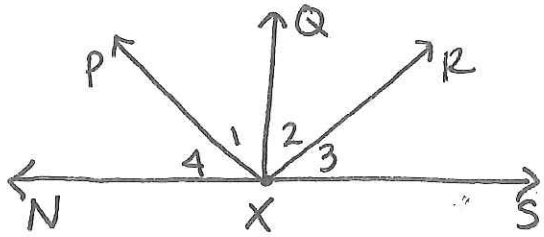
1. $\angle ABD \cong \angle CBD$	1. given
	linear pairs are suppl.
2. $\angle ABD + \angle CBD = 180°$	2. ~~def of suppl.~~
2.5 $\angle ABD + \angle ABD = 180°$	2.5 Subs
3. $2\angle ABD = 180°$	3. ~~Subs~~ CLT
4. $\angle ABD = 90°$	4. ~~def of Right $\angle$~~ division
~~5. $AC + BD = 90°$~~	~~5. def of $\perp$~~ Yuck!!!
6. $AC \perp BD$	6. def of $\perp$

3.) Given: $AB \perp BD$
$\angle EFG$ and $\angle CBD$ are compl.
Prove: $\angle EFG \cong \angle ABC$



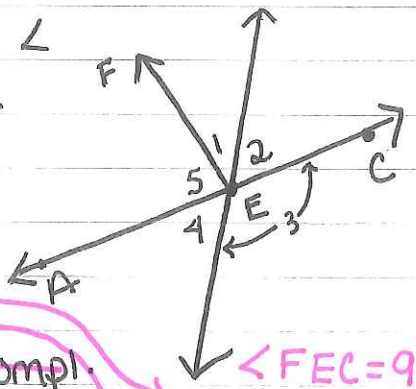
1. $AB \perp BD$	1. given
1. $\angle EFG + \angle CBD = 90°$	1.5 def of compl.
1.5 $\angle EFG + \angle CBD = 90°$	
2. $\angle ABC + \angle CBD = 90°$ ($\angle ABD$)	2. def of $\perp$ angle add
2.5 $\angle ABD = 90°$	2.5 def of $\perp$
3. $\angle EFG + \angle CBD = \angle CBD + \angle ABC$	3. Subs
4. $\angle EFG \cong \angle ABC$	4. Subt.

4.) Given: $\angle QXS$ and $\angle QXN$ are Right angles, $\angle 1 \cong \angle 3$
Prove: $\angle 2 \cong \angle 4$



1. $\angle QXS$ and $\angle QXN$ are ~~90°~~ Right $\angle$s, $\angle 1 \cong \angle 3$	1. given
2. $\angle QXS = 90°, \angle QXN = 90°$	2. def of Right $\angle$
2.5) $\angle QXS = \angle 2 + \angle 3$, $\angle QXN = \angle 4 + \angle 1$	2.5 angle add.
3. $90 = \angle 4 + \angle 1$, $90° = \angle 2 + \angle 3$	3. ~~def of compl.~~ Subs
4. $\angle QXS \cong \angle QXN$	4. Subs
5. $\angle 4 + \angle 1 = \angle 2 + \angle 3$	5. Subs
6. $\angle 4 + \angle 1 = \angle 2 + \angle 1$	6. Subs
7. $\angle 4 \cong \angle 2$	7. ~~Subs~~ Subt.

5.) Given: $\angle FEC$ is a Right $\angle$
Prove: $\angle 1$ and $\angle 4$ are compl.

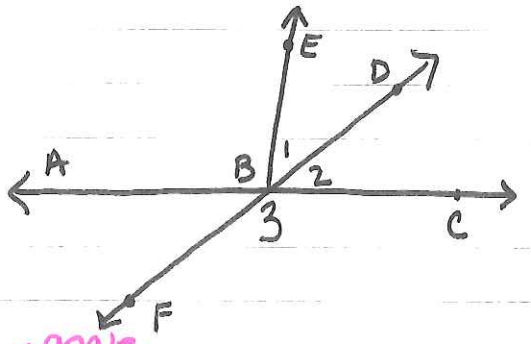


1. $\angle FEC$ is a Right $\angle$	1. given
2. $\angle 1 + \angle 2 = 90°$	2. ~~def of compl.~~ Subs
3. $\angle 2 \cong \angle 4$	3. vertical $\angle$s are $\cong$
4. $\angle 1 + \angle 4 = 90°$	4. ~~def of compl.~~ Subs
5. $\angle 1$ and $\angle 4$ ~~are 90°~~ are compl.	5. def of compl.

$\angle FEC = 90°$ def of Right $\angle$

$\angle 1 + \angle 2 = \angle FEC$ angle add

6.) Given: BD bisects $\angle EBC$
Prove: $\angle 1$ and $\angle 3$ are suppl.



1. BD bisects $\angle EBC$	1. given
2. $\angle 1 \cong \angle 2$	2. def of bisector (angle)
3. $\angle 2 + \angle 3 = 180°$	3. ~~angle add~~. linear pairs are suppl.
4. $\angle 1 + \angle 3 = 180°$	4. subs
5. $\angle 1$ and $\angle 3$ are Suppl.	5. def of suppl.