

# Review Year 10 – Level 5 guides

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## Sample A

### PROBLEM

Do the heights of boys at Kumeti Middle School tend to be taller than the heights of girls at Kumeti Middle School?

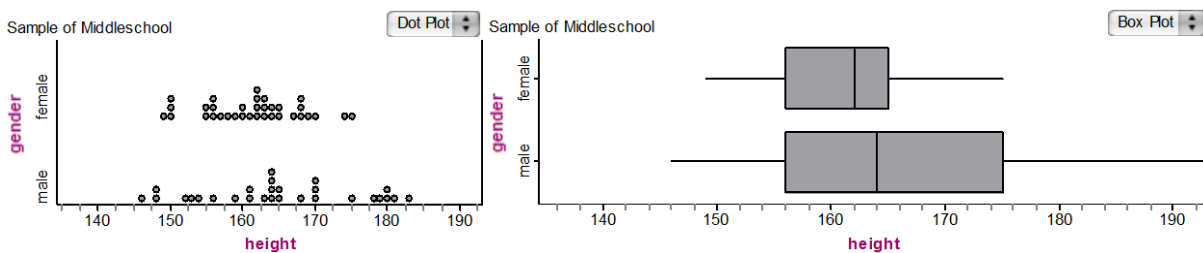
### PLAN

Take a sample of approx 30 girls and approx 30 boys from Kumeti Middle School. (Draw out of bag containing the population, or use Fathom to take a sample).

### DATA

Read and record the heights for each student. (Using Fathom take a sample of at least 30 girls and at least 30 boys – see [middlepopschoolheight30.ftm](#) file)

### ANALYSIS



**Middle 50%:**

**Shift:** From the samples I notice...

**Overlap:** From the samples I notice ...

**Anything unusual or interesting:**

From the samples I notice...

I worry or think that ...

**Shape** (Describe the shape of each sample distribution, compare the shapes of the two sample distributions):

From the samples I notice...

Back in the two populations I wonder if ...

**Spread** (Describe the spread of each sample distribution, compare the spreads of the two sample distributions):

From the samples I notice...

Back in the two populations I wonder if ...

## CONCLUSION

**Write a conclusion using the headings below.**

Answer the problem:

*“Do the heights of boys at Kumeti Middle School tend to be taller than the heights of girls at Kumeti Middle School?”*

**Level 5 test:** the 3/4-1/2 rule

If the median for one of the samples lies outside the box for the other sample

(e.g. *“more than half of the B group are above three quarters of the A group”*)

make the call that ***B tends to be bigger than A*** back in the populations

[Restrict to sample sizes of between 20 and 40 in each group]



**EITHER:** I am able to make a claim that ...

**OR:** It is too close to call ...

Explain why you have made this conclusion.

Evidence:

If I took another sample...

Does this conclusion make sense with what you personally know about heights of year 7-10 boys and girls?  
Why/ why not?

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## Sample B

### PROBLEM

Do the heights of boys at Kumeti Middle School tend to be taller than the heights of girls at Kumeti Middle School?

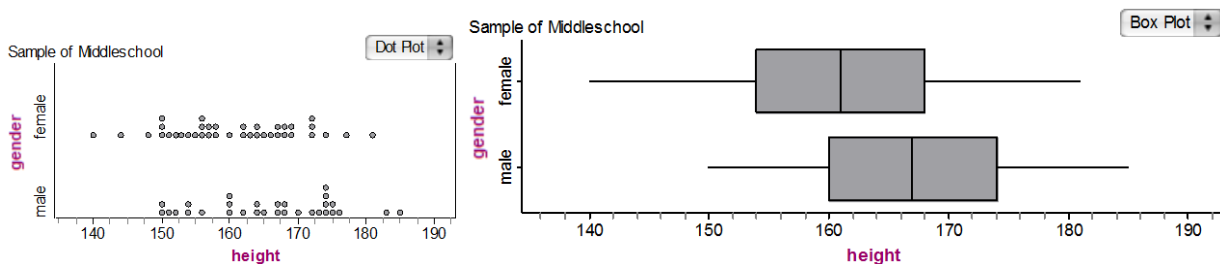
### PLAN

Take a sample of approx 30 girls and approx 30 boys from Kumeti Middle School. (Draw out of bag containing the population, or use Fathom to take a sample).

### DATA

Read and record the heights for each student. (Using Fathom take a sample of at least 30 girls and at least 30 boys – see [middlepopschoolheight30.ftm](#) file)

### ANALYSIS



#### Middle 50%:

**Shift:** From the samples I notice...

**Overlap:** From the samples I notice ...

#### Anything unusual or interesting:

From the samples I notice...

I worry or think that ...

#### Shape (Describe the shape of each sample distribution, compare the shapes of the two sample distributions):

From the samples I notice...

Back in the two populations I wonder if ...

**Spread** (Describe the spread of each sample distribution, compare the spreads of the two sample distributions):

From the samples I notice...

Back in the two populations I wonder if ...

## CONCLUSION

**Write a conclusion using the headings below.**

Answer the problem:

*“Do the heights of boys at Kumeti Middle School tend to be taller than the heights of girls at Kumeti Middle School?”*

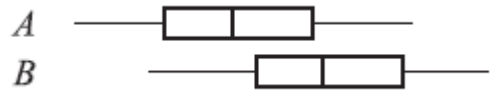
**Level 5 test:** the 3/4-1/2 rule

If the median for one of the samples lies outside the box for the other sample

(e.g. *“more than half of the B group are above three quarters of the A group”*)

make the call that ***B tends to be bigger than A*** back in the populations

[Restrict to sample sizes of between 20 and 40 in each group]



**EITHER:** I am able to make a claim that ...

**OR:** It is too close to call ...

Explain why you have made this conclusion.

Evidence:

If I took another sample...

Does this conclusion make sense with what you personally know about heights of year 7-10 boys and girls?  
Why/ why not?

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## Sample C

### PROBLEM

Do the heights of boys at Kumeti Middle School tend to be taller than the heights of girls at Kumeti Middle School?

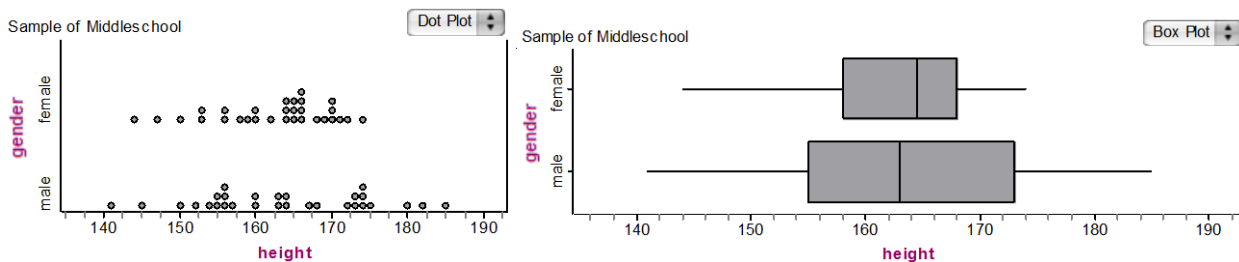
### PLAN

Take a sample of approx 30 girls and approx 30 boys from Kumeti Middle School. (Draw out of bag containing the population, or use Fathom to take a sample).

### DATA

Read and record the heights for each student. (Using Fathom take a sample of at least 30 girls and at least 30 boys – see **middlepopschoolheight30.ftm** file)

### ANALYSIS



**Middle 50%:**

**Shift:** From the samples I notice...

**Overlap:** From the samples I notice ...

**Anything unusual or interesting:**

From the samples I notice...

I worry or think that ...

**Shape** (Describe the shape of each sample distribution, compare the shapes of the two sample distributions):

From the samples I notice...

Back in the two populations I wonder if ...

**Spread** (Describe the spread of each sample distribution, compare the spreads of the two sample distributions):

From the samples I notice...

Back in the two populations I wonder if ...

## CONCLUSION

**Write a conclusion using the headings below.**

Answer the problem:

*“Do the heights of boys at Kumeti Middle School tend to be taller than the heights of girls at Kumeti Middle School?”*

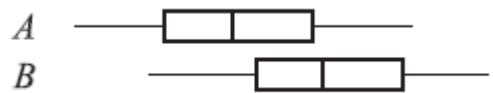
**Level 5 test:** the 3/4-1/2 rule

If the median for one of the samples lies outside the box for the other sample

(e.g. *“more than half of the B group are above three quarters of the A group”*)

make the call that ***B tends to be bigger than A*** back in the populations

[Restrict to sample sizes of between 20 and 40 in each group]



**EITHER:** I am able to make a claim that ...

**OR:** It is too close to call ...

Explain why you have made this conclusion.

Evidence:

If I took another sample...

Does this conclusion make sense with what you personally know about heights of year 7-10 boys and girls?  
Why/ why not?

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## Sample D

### PROBLEM

Do the heights of boys at Kumeti Middle School tend to be taller than the heights of girls at Kumeti Middle School?

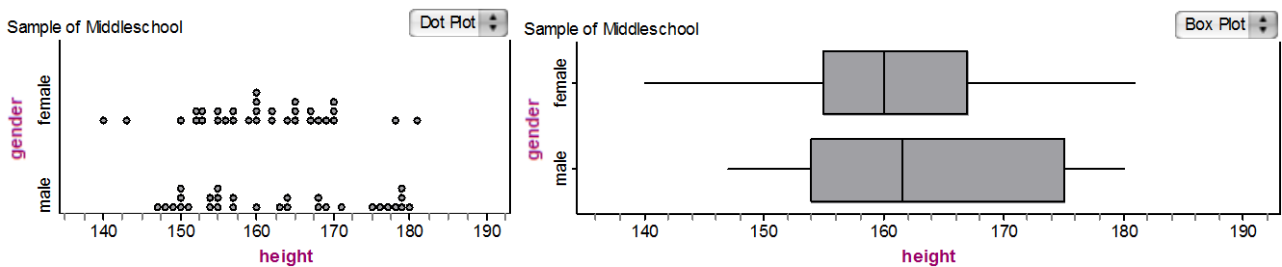
### PLAN

Take a sample of approx 30 girls and approx 30 boys from Kumeti Middle School. (Draw out of bag containing the population, or use Fathom to take a sample).

### DATA

Read and record the heights for each student. (Using Fathom take a sample of at least 30 girls and at least 30 boys – see [middlepopschoolheight30.ftm](#) file)

### ANALYSIS



**Middle 50%:**

**Shift:** From the samples I notice...

**Overlap:** From the samples I notice ...

**Anything unusual or interesting:**

From the samples I notice...

I worry or think that ...

**Shape** (Describe the shape of each sample distribution, compare the shapes of the two sample distributions):

From the samples I notice...

Back in the two populations I wonder if ...

**Spread** (Describe the spread of each sample distribution, compare the spreads of the two sample distributions):

From the samples I notice...

Back in the two populations I wonder if ...

## CONCLUSION

**Write a conclusion using the headings below.**

Answer the problem:

*“Do the heights of boys at Kumeti Middle School tend to be taller than the heights of girls at Kumeti Middle School?”*

**Level 5 test:** the 3/4-1/2 rule

If the median for one of the samples lies outside the box for the other sample

(e.g. *“more than half of the B group are above three quarters of the A group”*)

make the call that ***B tends to be bigger than A*** back in the populations

[Restrict to sample sizes of between 20 and 40 in each group]



**EITHER:** I am able to make a claim that ...

**OR:** It is too close to call ...

Explain why you have made this conclusion.

Evidence:

If I took another sample...

Does this conclusion make sense with what you personally know about heights of year 7-10 boys and girls?  
Why/ why not?



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## Sample E

### PROBLEM

Do the heights of boys at Kumeti Middle School tend to be taller than the heights of girls at Kumeti Middle School?

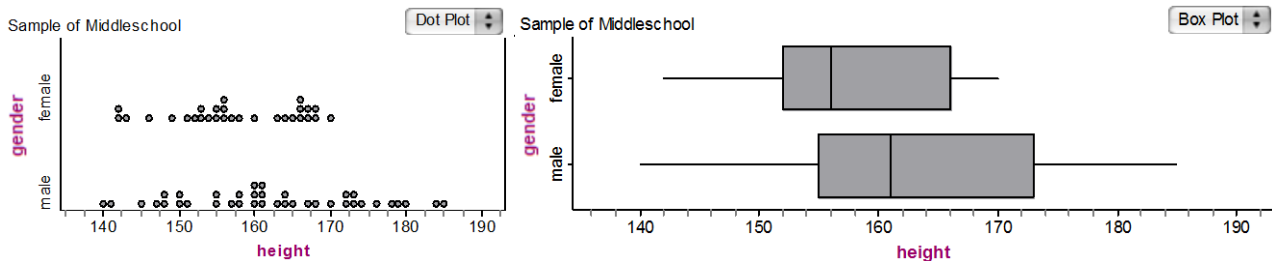
### PLAN

Take a sample of approx 30 girls and approx 30 boys from Kumeti Middle School. (Draw out of bag containing the population, or use Fathom to take a sample).

### DATA

Read and record the heights for each student. (Using Fathom take a sample of at least 30 girls and at least 30 boys – see [middlepopschoolheight30.ftm](#) file)

### ANALYSIS



**Middle 50%:**

**Shift:** From the samples I notice...

**Overlap:** From the samples I notice ...

**Anything unusual or interesting:**

From the samples I notice...

I worry or think that ...

**Shape** (Describe the shape of each sample distribution, compare the shapes of the two sample distributions):

From the samples I notice...

Back in the two populations I wonder if ...

**Spread** (Describe the spread of each sample distribution, compare the spreads of the two sample distributions):

From the samples I notice...

Back in the two populations I wonder if ...

## CONCLUSION

**Write a conclusion using the headings below.**

Answer the problem:

*“Do the heights of boys at Kumeti Middle School tend to be taller than the heights of girls at Kumeti Middle School?”*

**Level 5 test:** the 3/4-1/2 rule

If the median for one of the samples lies outside the box for the other sample

(e.g. *“more than half of the B group are above three quarters of the A group”*)

make the call that ***B tends to be bigger than A*** back in the populations

[Restrict to sample sizes of between 20 and 40 in each group]



**EITHER:** I am able to make a claim that ...

**OR:** It is too close to call ...

Explain why you have made this conclusion.

Evidence:

If I took another sample...

Does this conclusion make sense with what you personally know about heights of year 7-10 boys and girls?  
Why/ why not?

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## Sample F

### PROBLEM

Do the heights of boys at Kumeti Middle School tend to be taller than the heights of girls at Kumeti Middle School?

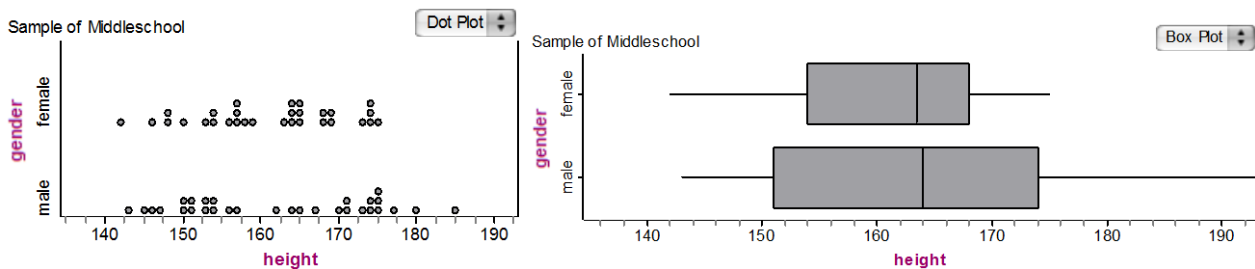
### PLAN

Take a sample of approx 30 girls and approx 30 boys from Kumeti Middle School. (Draw out of bag containing the population, or use Fathom to take a sample).

### DATA

Read and record the heights for each student. (Using Fathom take a sample of at least 30 girls and at least 30 boys – see [middlepopschoolheight30.ftm](#) file)

### ANALYSIS



**Middle 50%:**

**Shift:** From the samples I notice...

**Overlap:** From the samples I notice ...

**Anything unusual or interesting:**

From the samples I notice...

I worry or think that ...

**Shape** (Describe the shape of each sample distribution, compare the shapes of the two sample distributions):

From the samples I notice...

Back in the two populations I wonder if ...

**Spread** (Describe the spread of each sample distribution, compare the spreads of the two sample distributions):

From the samples I notice...

Back in the two populations I wonder if ...

## CONCLUSION

**Write a conclusion using the headings below.**

Answer the problem:

*“Do the heights of boys at Kumeti Middle School tend to be taller than the heights of girls at Kumeti Middle School?”*

**Level 5 test:** the 3/4-1/2 rule

If the median for one of the samples lies outside the box for the other sample

(e.g. *“more than half of the B group are above three quarters of the A group”*)

make the call that ***B tends to be bigger than A*** back in the populations

[Restrict to sample sizes of between 20 and 40 in each group]



**EITHER:** I am able to make a claim that ...

**OR:** It is too close to call ...

Explain why you have made this conclusion.

Evidence:

If I took another sample...

Does this conclusion make sense with what you personally know about heights of year 7-10 boys and girls?  
Why/ why not?

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## Sample G

### PROBLEM

Do the heights of boys at Kumeti Middle School tend to be taller than the heights of girls at Kumeti Middle School?

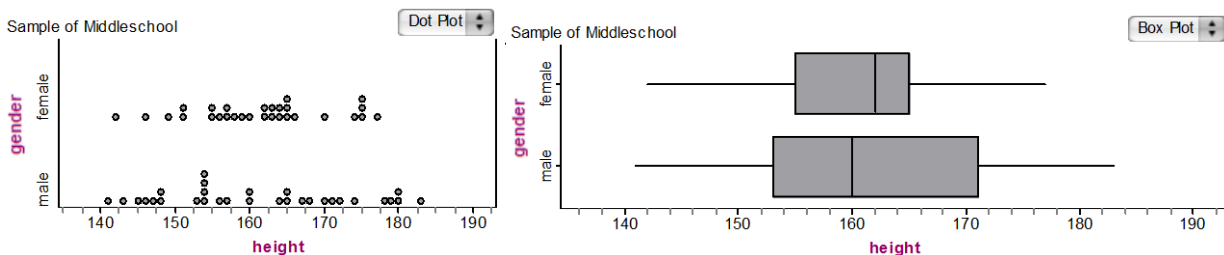
### PLAN

Take a sample of approx 30 girls and approx 30 boys from Kumeti Middle School. (Draw out of bag containing the population, or use Fathom to take a sample).

### DATA

Read and record the heights for each student. (Using Fathom take a sample of at least 30 girls and at least 30 boys – see [middlepopschoolheight30.ftm](#) file)

### ANALYSIS



**Middle 50%:**

**Shift:** From the samples I notice...

**Overlap:** From the samples I notice ...

**Anything unusual or interesting:**

From the samples I notice...

I worry or think that ...

**Shape** (Describe the shape of each sample distribution, compare the shapes of the two sample distributions):

From the samples I notice...

Back in the two populations I wonder if ...

**Spread** (Describe the spread of each sample distribution, compare the spreads of the two sample distributions):

From the samples I notice...

Back in the two populations I wonder if ...

## CONCLUSION

**Write a conclusion using the headings below.**

Answer the problem:

*“Do the heights of boys at Kumeti Middle School tend to be taller than the heights of girls at Kumeti Middle School?”*

**Level 5 test:** the 3/4-1/2 rule

If the median for one of the samples lies outside the box for the other sample

(e.g. *“more than half of the B group are above three quarters of the A group”*)

make the call that ***B tends to be bigger than A*** back in the populations

[Restrict to sample sizes of between 20 and 40 in each group]



**EITHER:** I am able to make a claim that ...

**OR:** It is too close to call ...

Explain why you have made this conclusion.

Evidence:

If I took another sample...

Does this conclusion make sense with what you personally know about heights of year 7-10 boys and girls?  
Why/ why not?

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## Sample H

### PROBLEM

Do the heights of boys at Kumeti Middle School tend to be taller than the heights of girls at Kumeti Middle School?

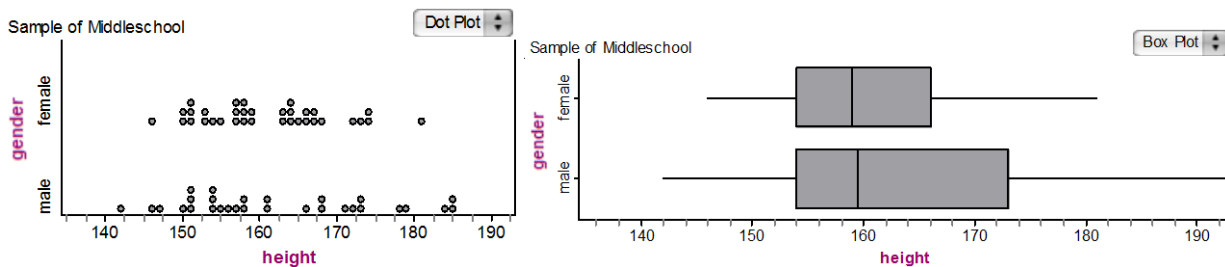
### PLAN

Take a sample of approx 30 girls and approx 30 boys from Kumeti Middle School. (Draw out of bag containing the population, or use Fathom to take a sample).

### DATA

Read and record the heights for each student. (Using Fathom take a sample of at least 30 girls and at least 30 boys – see [middlepopschoolheight30.ftm](#) file)

### ANALYSIS



**Middle 50%:**

**Shift:** From the samples I notice...

**Overlap:** From the samples I notice ...

**Anything unusual or interesting:**

From the samples I notice...

I worry or think that ...

**Shape** (Describe the shape of each sample distribution, compare the shapes of the two sample distributions):

From the samples I notice...

Back in the two populations I wonder if ...

**Spread** (Describe the spread of each sample distribution, compare the spreads of the two sample distributions):

From the samples I notice...

Back in the two populations I wonder if ...

## CONCLUSION

**Write a conclusion using the headings below.**

Answer the problem:

*“Do the heights of boys at Kumeti Middle School tend to be taller than the heights of girls at Kumeti Middle School?”*

**Level 5 test:** the 3/4-1/2 rule

If the median for one of the samples lies outside the box for the other sample

(e.g. *“more than half of the B group are above three quarters of the A group”*)

make the call that ***B tends to be bigger than A*** back in the populations

[Restrict to sample sizes of between 20 and 40 in each group]



**EITHER:** I am able to make a claim that ...

**OR:** It is too close to call ...

Explain why you have made this conclusion.

Evidence:

If I took another sample...

Does this conclusion make sense with what you personally know about heights of year 7-10 boys and girls?  
Why/ why not?



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## Sample I

### PROBLEM

Do the heights of boys at Kumeti Middle School tend to be taller than the heights of girls at Kumeti Middle School?

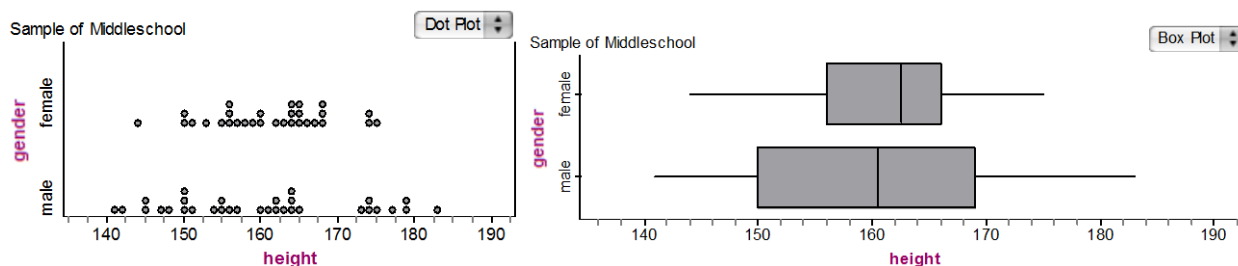
### PLAN

Take a sample of approx 30 girls and approx 30 boys from Kumeti Middle School. (Draw out of bag containing the population, or use Fathom to take a sample).

### DATA

Read and record the heights for each student. (Using Fathom take a sample of at least 30 girls and at least 30 boys – see [middlepopschoolheight30.ftm](#) file)

### ANALYSIS



#### Middle 50%:

**Shift:** From the samples I notice...

**Overlap:** From the samples I notice ...

#### Anything unusual or interesting:

From the samples I notice...

I worry or think that ...

#### Shape (Describe the shape of each sample distribution, compare the shapes of the two sample distributions):

From the samples I notice...

Back in the two populations I wonder if ...

**Spread** (Describe the spread of each sample distribution, compare the spreads of the two sample distributions):

From the samples I notice...

Back in the two populations I wonder if ...

## CONCLUSION

**Write a conclusion using the headings below.**

Answer the problem:

*“Do the heights of boys at Kumeti Middle School tend to be taller than the heights of girls at Kumeti Middle School?”*

**Level 5 test:** the 3/4-1/2 rule

If the median for one of the samples lies outside the box for the other sample

(e.g. *“more than half of the B group are above three quarters of the A group”*)

make the call that ***B tends to be bigger than A*** back in the populations

[Restrict to sample sizes of between 20 and 40 in each group]



**EITHER:** I am able to make a claim that ...

**OR:** It is too close to call ...

Explain why you have made this conclusion.

Evidence:

If I took another sample...

Does this conclusion make sense with what you personally know about heights of year 7-10 boys and girls?  
Why/ why not?

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## Sample J

### PROBLEM

Do the heights of boys at Kumeti Middle School tend to be taller than the heights of girls at Kumeti Middle School?

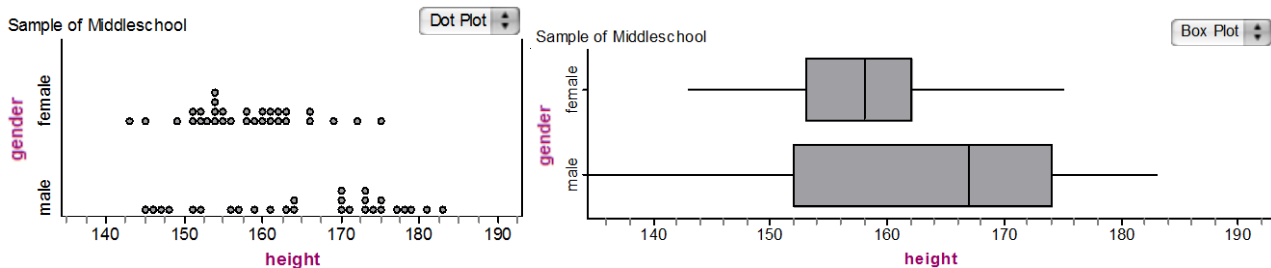
### PLAN

Take a sample of approx 30 girls and approx 30 boys from Kumeti Middle School. (Draw out of bag containing the population, or use Fathom to take a sample).

### DATA

Read and record the heights for each student. (Using Fathom take a sample of at least 30 girls and at least 30 boys – see [middlepopschoolheight30.ftm](#) file)

### ANALYSIS



**Middle 50%:**

**Shift:** From the samples I notice...

**Overlap:** From the samples I notice ...

**Anything unusual or interesting:**

From the samples I notice...

I worry or think that ...

**Shape** (Describe the shape of each sample distribution, compare the shapes of the two sample distributions):

From the samples I notice...

Back in the two populations I wonder if ...

**Spread** (Describe the spread of each sample distribution, compare the spreads of the two sample distributions):

From the samples I notice...

Back in the two populations I wonder if ...

## CONCLUSION

**Write a conclusion using the headings below.**

Answer the problem:

*“Do the heights of boys at Kumeti Middle School tend to be taller than the heights of girls at Kumeti Middle School?”*

**Level 5 test:** the 3/4-1/2 rule

If the median for one of the samples lies outside the box for the other sample

(e.g. *“more than half of the B group are above three quarters of the A group”*)

make the call that ***B tends to be bigger than A*** back in the populations

[Restrict to sample sizes of between 20 and 40 in each group]



**EITHER:** I am able to make a claim that ...

**OR:** It is too close to call ...

Explain why you have made this conclusion.

Evidence:

If I took another sample...

Does this conclusion make sense with what you personally know about heights of year 7-10 boys and girls?  
Why/ why not?

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## Sample K

### PROBLEM

Do the heights of boys at Kumeti Middle School tend to be taller than the heights of girls at Kumeti Middle School?

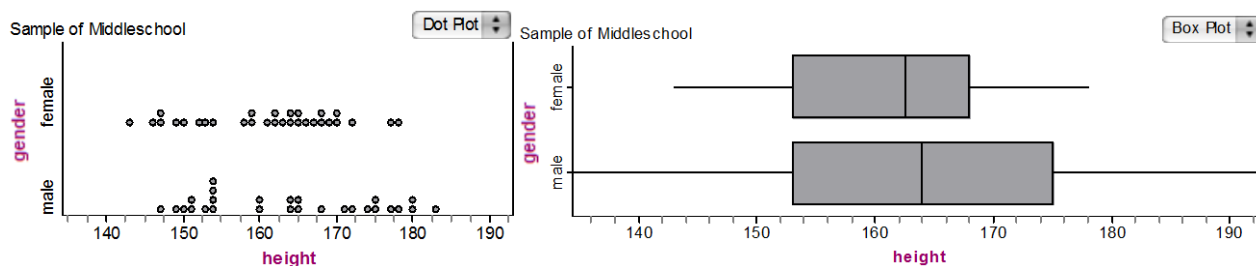
### PLAN

Take a sample of approx 30 girls and approx 30 boys from Kumeti Middle School. (Draw out of bag containing the population, or use Fathom to take a sample).

### DATA

Read and record the heights for each student. (Using Fathom take a sample of at least 30 girls and at least 30 boys – see [middlepopschoolheight30.ftm](#) file)

### ANALYSIS



#### Middle 50%:

**Shift:** From the samples I notice...

**Overlap:** From the samples I notice ...

#### Anything unusual or interesting:

From the samples I notice...

I worry or think that ...

#### Shape (Describe the shape of each sample distribution, compare the shapes of the two sample distributions):

From the samples I notice...

Back in the two populations I wonder if ...

**Spread** (Describe the spread of each sample distribution, compare the spreads of the two sample distributions):

From the samples I notice...

Back in the two populations I wonder if ...

## CONCLUSION

**Write a conclusion using the headings below.**

Answer the problem:

*“Do the heights of boys at Kumeti Middle School tend to be taller than the heights of girls at Kumeti Middle School?”*

**Level 5 test:** the 3/4-1/2 rule

If the median for one of the samples lies outside the box for the other sample

(e.g. *“more than half of the B group are above three quarters of the A group”*)

make the call that ***B tends to be bigger than A*** back in the populations

[Restrict to sample sizes of between 20 and 40 in each group]



**EITHER:** I am able to make a claim that ...

**OR:** It is too close to call ...

Explain why you have made this conclusion.

Evidence:

If I took another sample...

Does this conclusion make sense with what you personally know about heights of year 7-10 boys and girls?  
Why/ why not?

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## Sample L

### PROBLEM

Do the heights of boys at Kumeti Middle School tend to be taller than the heights of girls at Kumeti Middle School?

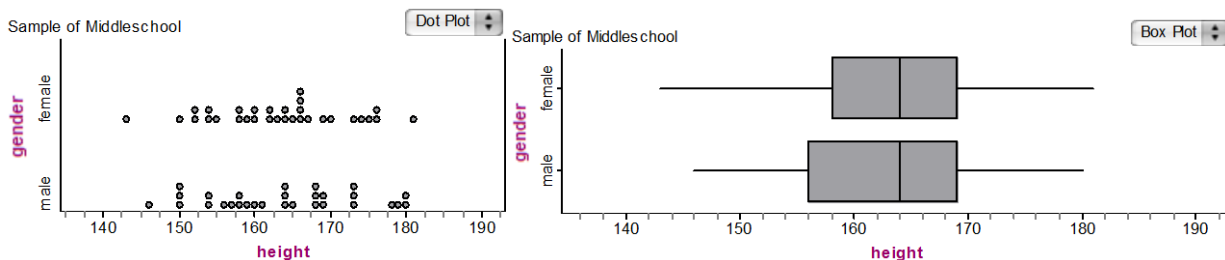
### PLAN

Take a sample of approx 30 girls and approx 30 boys from Kumeti Middle School. (Draw out of bag containing the population, or use Fathom to take a sample).

### DATA

Read and record the heights for each student. (Using Fathom take a sample of at least 30 girls and at least 30 boys – see [middlepopschoolheight30.ftm](#) file)

### ANALYSIS



#### Middle 50%:

**Shift:** From the samples I notice...

**Overlap:** From the samples I notice ...

#### Anything unusual or interesting:

From the samples I notice...

I worry or think that ...

#### Shape (Describe the shape of each sample distribution, compare the shapes of the two sample distributions):

From the samples I notice...

Back in the two populations I wonder if ...

**Spread** (Describe the spread of each sample distribution, compare the spreads of the two sample distributions):

From the samples I notice...

Back in the two populations I wonder if ...

## CONCLUSION

**Write a conclusion using the headings below.**

Answer the problem:

*“Do the heights of boys at Kumeti Middle School tend to be taller than the heights of girls at Kumeti Middle School?”*

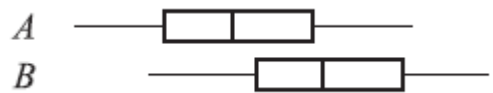
**Level 5 test:** the 3/4-1/2 rule

If the median for one of the samples lies outside the box for the other sample

(e.g. *“more than half of the B group are above three quarters of the A group”*)

make the call that ***B tends to be bigger than A*** back in the populations

[Restrict to sample sizes of between 20 and 40 in each group]



**EITHER:** I am able to make a claim that ...

**OR:** It is too close to call ...

Explain why you have made this conclusion.

Evidence:

If I took another sample...

Does this conclusion make sense with what you personally know about heights of year 7-10 boys and girls?  
Why/ why not?



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## Sample M

### PROBLEM

Do the heights of boys at Kumeti Middle School tend to be taller than the heights of girls at Kumeti Middle School?

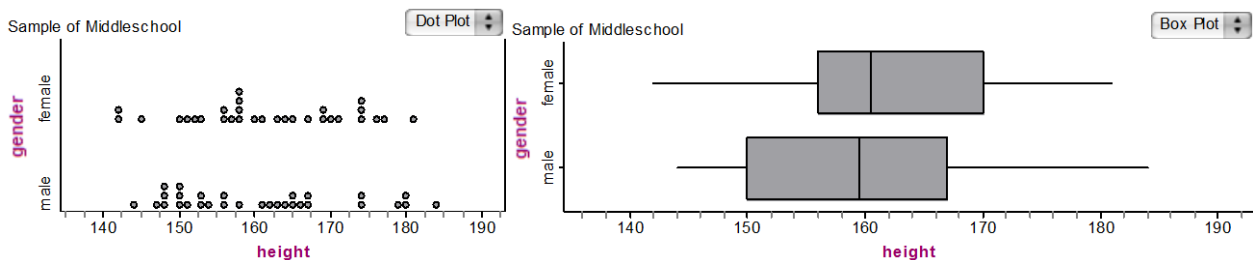
### PLAN

Take a sample of approx 30 girls and approx 30 boys from Kumeti Middle School. (Draw out of bag containing the population, or use Fathom to take a sample).

### DATA

Read and record the heights for each student. (Using Fathom take a sample of at least 30 girls and at least 30 boys – see [middlepopschoolheight30.ftm](#) file)

### ANALYSIS



**Middle 50%:**

**Shift:** From the samples I notice...

**Overlap:** From the samples I notice ...

**Anything unusual or interesting:**

From the samples I notice...

I worry or think that ...

**Shape** (Describe the shape of each sample distribution, compare the shapes of the two sample distributions):

From the samples I notice...

Back in the two populations I wonder if ...

**Spread** (Describe the spread of each sample distribution, compare the spreads of the two sample distributions):

From the samples I notice...

Back in the two populations I wonder if ...

## CONCLUSION

**Write a conclusion using the headings below.**

Answer the problem:

*“Do the heights of boys at Kumeti Middle School tend to be taller than the heights of girls at Kumeti Middle School?”*

**Level 5 test:** the 3/4-1/2 rule

If the median for one of the samples lies outside the box for the other sample

(e.g. *“more than half of the B group are above three quarters of the A group”*)

make the call that ***B tends to be bigger than A*** back in the populations

[Restrict to sample sizes of between 20 and 40 in each group]



**EITHER:** I am able to make a claim that ...

**OR:** It is too close to call ...

Explain why you have made this conclusion.

Evidence:

If I took another sample...

Does this conclusion make sense with what you personally know about heights of year 7-10 boys and girls?  
Why/ why not?

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## Sample N

### PROBLEM

Do the heights of boys at Kumeti Middle School tend to be taller than the heights of girls at Kumeti Middle School?

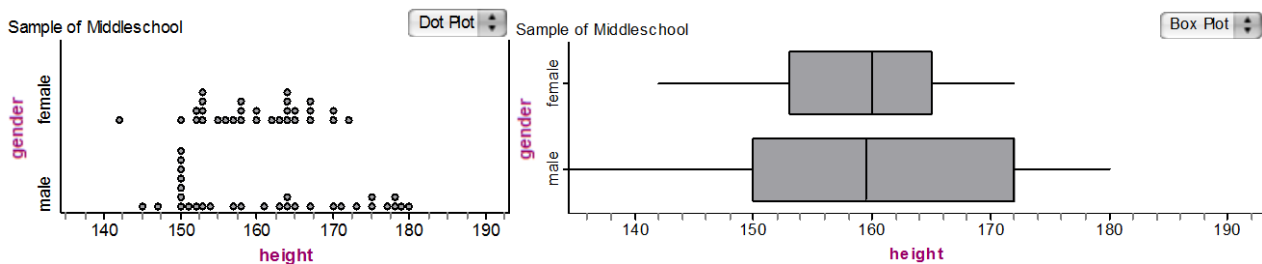
### PLAN

Take a sample of approx 30 girls and approx 30 boys from Kumeti Middle School. (Draw out of bag containing the population, or use Fathom to take a sample).

### DATA

Read and record the heights for each student. (Using Fathom take a sample of at least 30 girls and at least 30 boys – see [middlepopschoolheight30.ftm](#) file)

### ANALYSIS



**Middle 50%:**

**Shift:** From the samples I notice...

**Overlap:** From the samples I notice ...

**Anything unusual or interesting:**

From the samples I notice...

I worry or think that ...

**Shape** (Describe the shape of each sample distribution, compare the shapes of the two sample distributions):

From the samples I notice...

Back in the two populations I wonder if ...

**Spread** (Describe the spread of each sample distribution, compare the spreads of the two sample distributions):

From the samples I notice...

Back in the two populations I wonder if ...

## CONCLUSION

**Write a conclusion using the headings below.**

Answer the problem:

*“Do the heights of boys at Kumeti Middle School tend to be taller than the heights of girls at Kumeti Middle School?”*

**Level 5 test:** the 3/4-1/2 rule

If the median for one of the samples lies outside the box for the other sample

(e.g. *“more than half of the B group are above three quarters of the A group”*)

make the call that ***B tends to be bigger than A*** back in the populations

[Restrict to sample sizes of between 20 and 40 in each group]



**EITHER:** I am able to make a claim that ...

**OR:** It is too close to call ...

Explain why you have made this conclusion.

Evidence:

If I took another sample...

Does this conclusion make sense with what you personally know about heights of year 7-10 boys and girls?  
Why/ why not?

# Review Year 10 – Level 5 guides

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## Sample O

### PROBLEM

Do the heights of boys at Kumeti Middle School tend to be taller than the heights of girls at Kumeti Middle School?

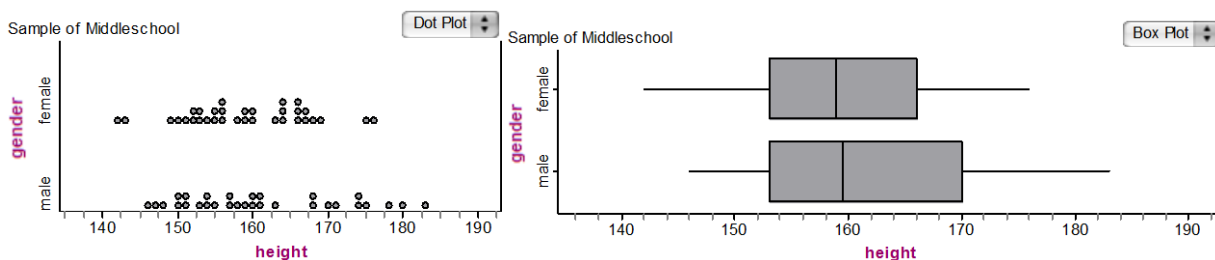
### PLAN

Take a sample of approx 30 girls and approx 30 boys from Kumeti Middle School. (Draw out of bag containing the population, or use Fathom to take a sample).

### DATA

Read and record the heights for each student. (Using Fathom take a sample of at least 30 girls and at least 30 boys – see [middlepopschoolheight30.ftm](#) file)

### ANALYSIS



**Middle 50%:**

**Shift:** From the samples I notice...

**Overlap:** From the samples I notice ...

**Anything unusual or interesting:**

From the samples I notice...

I worry or think that ...

**Shape** (Describe the shape of each sample distribution, compare the shapes of the two sample distributions):

From the samples I notice...

Back in the two populations I wonder if ...

**Spread** (Describe the spread of each sample distribution, compare the spreads of the two sample distributions):

From the samples I notice...

Back in the two populations I wonder if ...

## CONCLUSION

**Write a conclusion using the headings below.**

Answer the problem:

*“Do the heights of boys at Kumeti Middle School tend to be taller than the heights of girls at Kumeti Middle School?”*

**Level 5 test:** the 3/4-1/2 rule

If the median for one of the samples lies outside the box for the other sample

(e.g. *“more than half of the B group are above three quarters of the A group”*)

make the call that ***B tends to be bigger than A*** back in the populations

[Restrict to sample sizes of between 20 and 40 in each group]



**EITHER:** I am able to make a claim that ...

**OR:** It is too close to call ...

Explain why you have made this conclusion.

Evidence:

If I took another sample...

Does this conclusion make sense with what you personally know about heights of year 7-10 boys and girls?  
Why/ why not?

# Review Year 10 – Level 5 guides

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## Sample P

### PROBLEM

Do the heights of boys at Kumeti Middle School tend to be taller than the heights of girls at Kumeti Middle School?

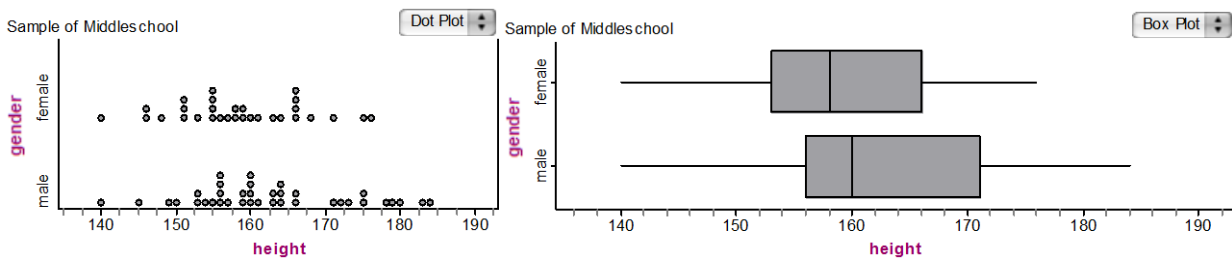
### PLAN

Take a sample of approx 30 girls and approx 30 boys from Kumeti Middle School. (Draw out of bag containing the population, or use Fathom to take a sample).

### DATA

Read and record the heights for each student. (Using Fathom take a sample of at least 30 girls and at least 30 boys – see [middlepopschoolheight30.ftm](#) file)

### ANALYSIS



**Middle 50%:**

**Shift:** From the samples I notice...

**Overlap:** From the samples I notice ...

**Anything unusual or interesting:**

From the samples I notice...

I worry or think that ...

**Shape** (Describe the shape of each sample distribution, compare the shapes of the two sample distributions):

From the samples I notice...

Back in the two populations I wonder if ...

**Spread** (Describe the spread of each sample distribution, compare the spreads of the two sample distributions):

From the samples I notice...

Back in the two populations I wonder if ...

## CONCLUSION

**Write a conclusion using the headings below.**

Answer the problem:

*“Do the heights of boys at Kumeti Middle School tend to be taller than the heights of girls at Kumeti Middle School?”*

**Level 5 test:** the 3/4-1/2 rule

If the median for one of the samples lies outside the box for the other sample

(e.g. *“more than half of the B group are above three quarters of the A group”*)

make the call that ***B tends to be bigger than A*** back in the populations

[Restrict to sample sizes of between 20 and 40 in each group]



**EITHER:** I am able to make a claim that ...

**OR:** It is too close to call ...

Explain why you have made this conclusion.

Evidence:

If I took another sample...

Does this conclusion make sense with what you personally know about heights of year 7-10 boys and girls?  
Why/ why not?



# Review Year 10 – Level 5 guides

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## Sample Q

### PROBLEM

Do the heights of boys at Kumeti Middle School tend to be taller than the heights of girls at Kumeti Middle School?

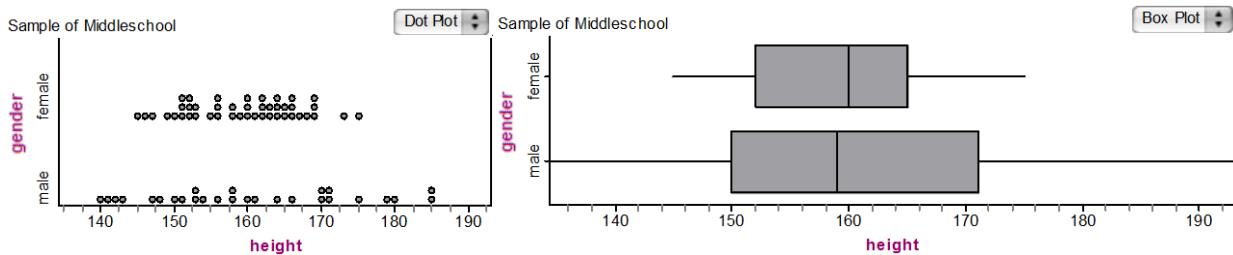
### PLAN

Take a sample of approx 30 girls and approx 30 boys from Kumeti Middle School. (Draw out of bag containing the population, or use Fathom to take a sample).

### DATA

Read and record the heights for each student. (Using Fathom take a sample of at least 30 girls and at least 30 boys – see [middlepopschoolheight30.ftm](#) file)

### ANALYSIS



**Middle 50%:**

**Shift:** From the samples I notice...

**Overlap:** From the samples I notice ...

**Anything unusual or interesting:**

From the samples I notice...

I worry or think that ...

**Shape** (Describe the shape of each sample distribution, compare the shapes of the two sample distributions):

From the samples I notice...

Back in the two populations I wonder if ...

**Spread** (Describe the spread of each sample distribution, compare the spreads of the two sample distributions):

From the samples I notice...

Back in the two populations I wonder if ...

## CONCLUSION

**Write a conclusion using the headings below.**

Answer the problem:

*“Do the heights of boys at Kumeti Middle School tend to be taller than the heights of girls at Kumeti Middle School?”*

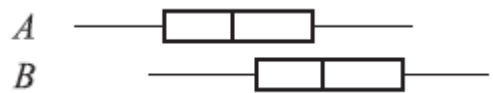
**Level 5 test:** the 3/4-1/2 rule

If the median for one of the samples lies outside the box for the other sample

(e.g. *“more than half of the B group are above three quarters of the A group”*)

make the call that ***B tends to be bigger than A*** back in the populations

[Restrict to sample sizes of between 20 and 40 in each group]



**EITHER:** I am able to make a claim that ...

**OR:** It is too close to call ...

Explain why you have made this conclusion.

Evidence:

If I took another sample...

Does this conclusion make sense with what you personally know about heights of year 7-10 boys and girls?  
Why/ why not?