UNIVERSITY OF ALBERTA
Department of Mechanical Engineering

10-203 Donadeo Innovation Centre for Engineering
Edmonton, Alberta, Canada, T6G 1H9
www.mece.ualberta.ca
Tel: 780.492.3598
Fax: 780.492.2200

Mec E 468 Numerical Simulation in Mechanical Engineering Design

AutoMARK REPORT

Semester: Win 2022

Instructor: Prof. David S. Nobes

Student Name:

Assignment: Assignment No 1

PROCESSING DATE: August 10, 2022

AUTOMark Assessment Grade: **709 out of 727**

AUTOMark Recommended Grade: **98 out of 100**

NOTE: This grade is preliminary only and needs to be confirmed.

The following pages include each of the drawings in the following order:

- Your submission
- Your submission marked by AutoMARK
- The solution

Other important points:

- Examples are given on eClass of how to interpret the mark-up symbols used by AUTOMark.
- If you have any questions, discuss with you TA in the next lab time.

DRAWING CREATION DATE: 28-Sep-2010 08:59:34

DRAWING LAST SAVE DATE: 30-Jun-2022 10:42:49

MODEL CREATION DATE: 23-Sep-2010 11:25:48

MODEL LAST SAVE DATE: 30-Jun-2022 10:42:49

*A*utoMARK details:

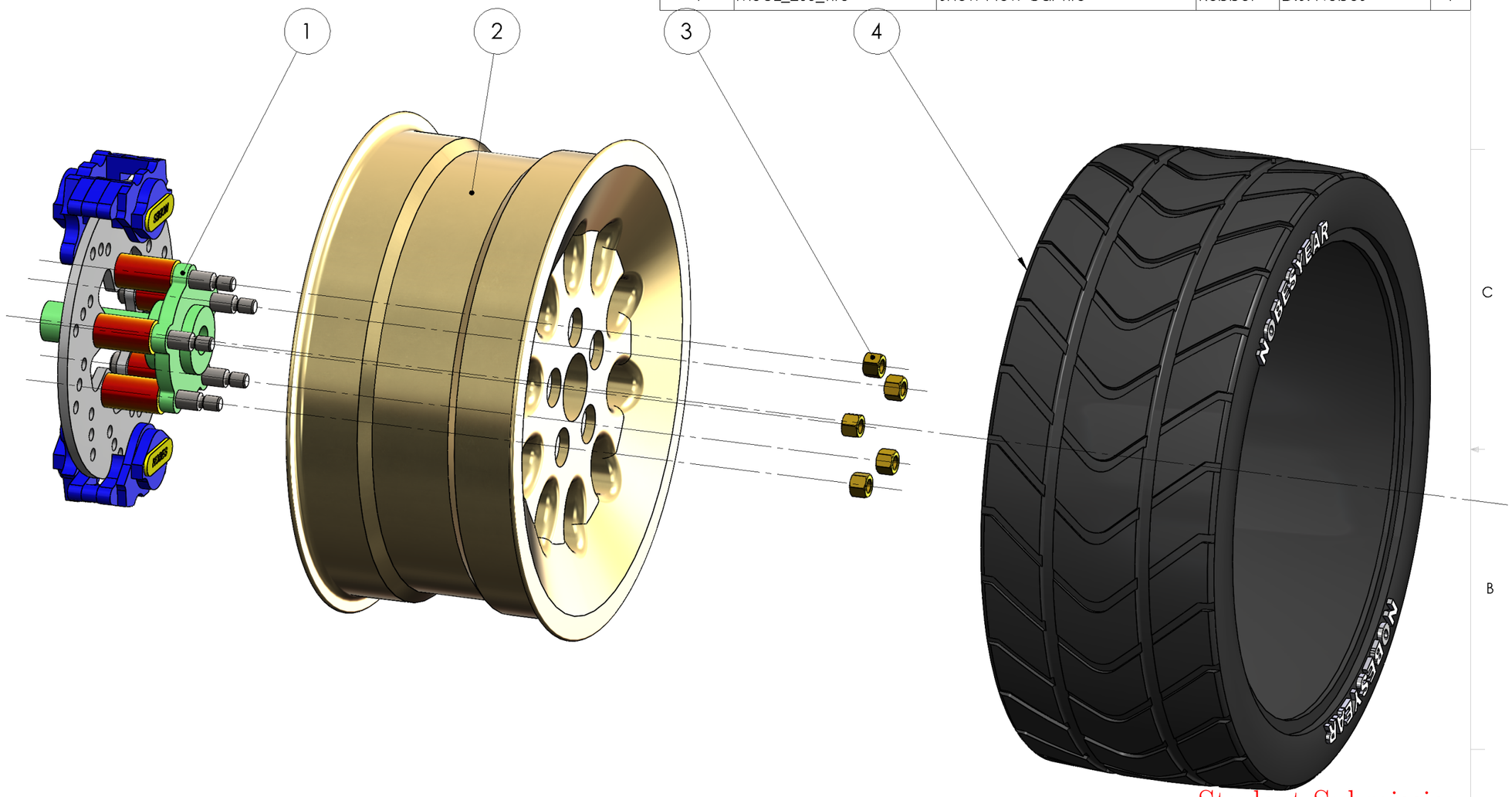
- Sheetnames should contain only alphabetical characters
- Weights of feature properties are set by the marker
- AutoMARK v 4.0 software written and designed by Owen Stadlwieser

*A*utoMARK Criterion (The weights of these criterion are decided by the marker):

- DRAWING: SheetOrder, ExtraSheets
- SHEET: SheetPaperSize, SheetScale, SheetTemplate, SheetExtraBOMS, SheetExtraViews, SheetViewTypes, SheetIntersectingBallons
- BILLOFMATERIALS: BOMTableType, BOMNumberColumns, BOMNumberRows, BOMPosition, BOMTableHeight, BOMTableWidth, BOMFontType, BOMFontSize
- VIEW: ViewScale, ViewDisplayStyle, ViewExtraDimension, ViewPosition, ViewExtraCenterMarks, ViewMass, ViewMaterial, ViewExtraDatums, ViewWrongProjection, ViewExtraCenterlines
- DIMENSION: DimensionDangling, DimensionWrongView, DimensionPosition, DimensionArrowSide, DimensionValue, DimensionBadText
- CENTERLINE: CenterlineDangling, CenterlinePosition
- CENTERMARK: CentermarkDangling, CentermarkPosition, CentermarkShowlines, CentermarkAngle, CentermarkConnectionLines, CentermarkExtensions, CentermarkGap, CentermarkSize, CentermarkGroupedCorrectly
- DATUM: DatumDangling, DatumWrongView, DatumPosition, DatumLabel, DatumDisplayStyle, DatumFilledTriangle
- Ballon: BallonDangling, BallonPosition

*S*ymbol/Colour	*M*eaning
✓	No deductions on feature
Colour	Incorrect value
Colour	Miscellaneous error
Colour	Incorrect Position
Colour	Unrecognized feature
Colour	Missing feature
?	Feature not found on key

ITEM NO.	SW-File Name(File Name)	SW-Title(Title)	Material	SW-Author(Author)	QTY.
1	MecE265_Car_Hub	Hub, Disk and Calaper Assembly	Various	D.S. Nobes	1
2	dsn_Rim	Custom Low Speed Snow Rim	Pure Gold	D.S.Nobes	1
3	MecE_265_Nut	ACME HTNUT 0.500-20-D-N	Brass	Wyle E. Coyote	5
4	MecE_265_Tire	Snow Plow Car Tire	Rubber	D.S. Nobes	1



Student Submission

MecE 265

Instructor:
Dr DS Nobes
Fall 2021

Comments:

UNLESS OTHERWISE SPECIFIED:

DIMENSIONS ARE IN MM
TOLERANCES:
ANGULAR: ± 0.5°
LINEAR
X = ± 0.5
X.X = ± 0.1
X.XX = ± 0.025

SURFACE FINISH 0.6 µm

DO NOT SCALE DRAWING

DRAWN BY:
David S. Nobes

Lab Day	ALL
SM By	**D.S.Nobes**
TA Initials	DSN

zacha
June 30, 2022 10:42:49 AM
September 23, 2010 11:25:48 AM

The Department of Mechanical Engineering
UNIVERSITY OF ALBERTA

TITLE:
Hub, Rim, Tire Assembly

MATERIAL:
Various

FILE NAME:
MecE265_Car_Hub_Rim_Tire

SIZE	Assignment Number	REV
B	Assignment 03	2

SCALE: 1:4 | Mass: 175308.62 | SHEET 1 OF 3

Drawing View15: 42/48
DetailItem439: 40/40
SHEET TOTAL: 131/137

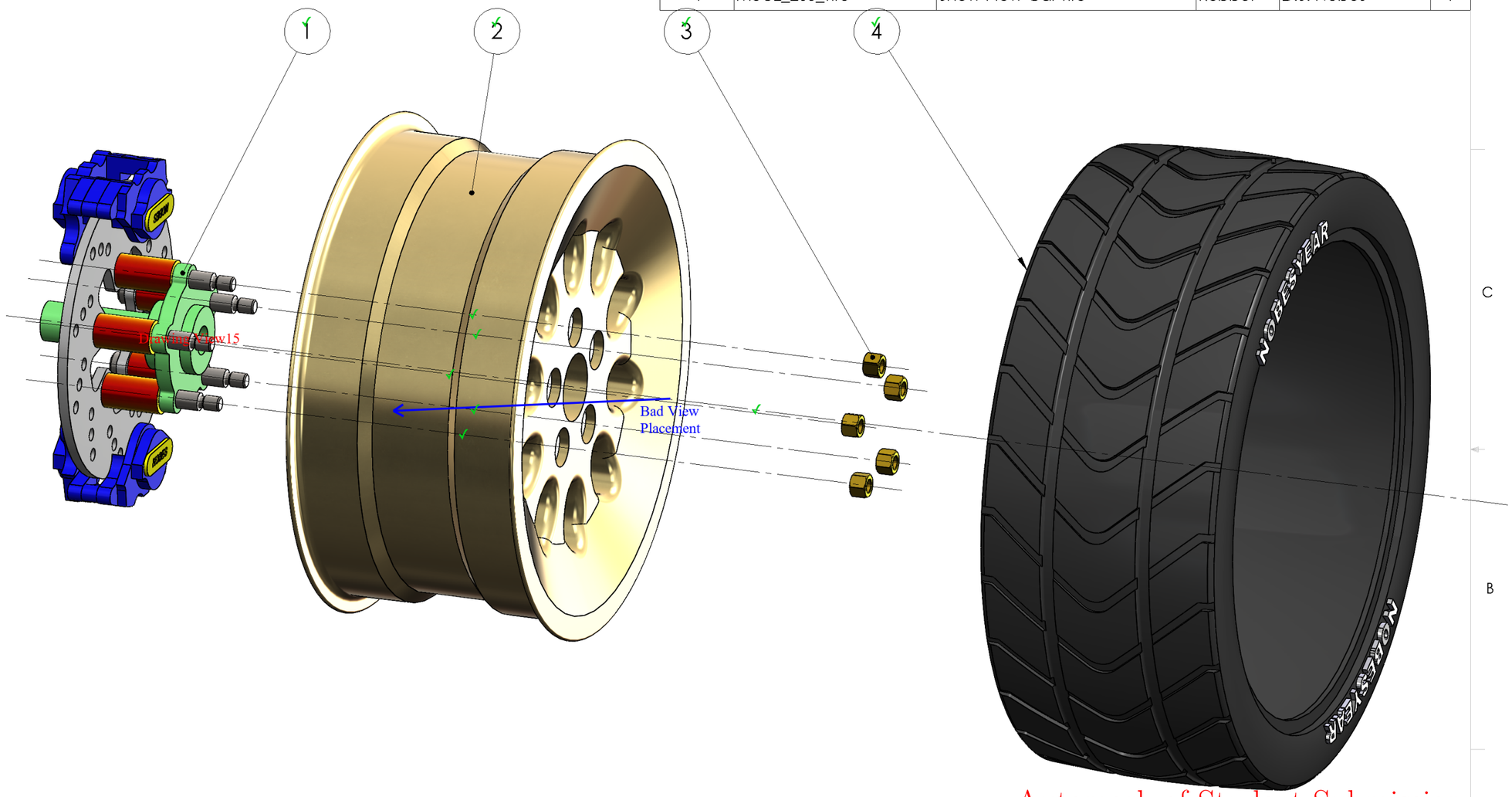
Correct Height
Correct Font
Correct Font Size
Correct Column Order
Correct Content

Correct Width

Snapped to Corner

ITEM NO.	SW-File Name(File Name)	SW-Title(Title)	Material	SW-Author(Author)	QTY.
1	MecE265_Car_Hub	Hub, Disk and Calaper Assembly	Various	D.S. Nobes	1
2	dsn_Rim	Custom Low Speed Snow Rim	Pure Gold	D.S.Nobes	1
3	MecE_265_Nut	ACME HTNUT 0.500-20-D-N	Brass	Wyle E. Coyote	5
4	MecE_265_Tire	Snow Plow Car Tire	Rubber	D.S. Nobes	1

Wrong Item #3



Automark of Student Submission

MecE 265 Instructor: Dr DS Nobes Fall 2021 Comments:	UNLESS OTHERWISE SPECIFIED: DIMENSIONS ARE IN MM TOLERANCES: ANGULAR: ± 0.5° LINEAR X = ± 0.5 X.X = ± 0.1 X.XX = ± 0.025 SURFACE FINISH µm 0.6 DO NOT SCALE DRAWING	DRAWN BY: David S. Nobes Lab Day: ALL SM By: D.S.Nobes TA Initials: DSN zacha June 30, 2022 10:42:49 AM September 23, 2010 11:25:48 AM	The Department of Mechanical Engineering UNIVERSITY OF ALBERTA TITLE: Hub, Rim, Tire Assembly SIZE B / Assignment Number: Assignment 03 / REV: 2 SCALE: 1:4 / Mass: 175308.62 / SHEET 1 OF 3
MATERIAL: Various			
FILE NAME: MecE265_Car_Hub_Rim_Tire			

Correct Tangent Line style
Correct Scale
Correct Display style

ITEM NO.	SW-File Name(File Name)	SW-Title(Title)	Material	SW-Author(Author)	QTY.
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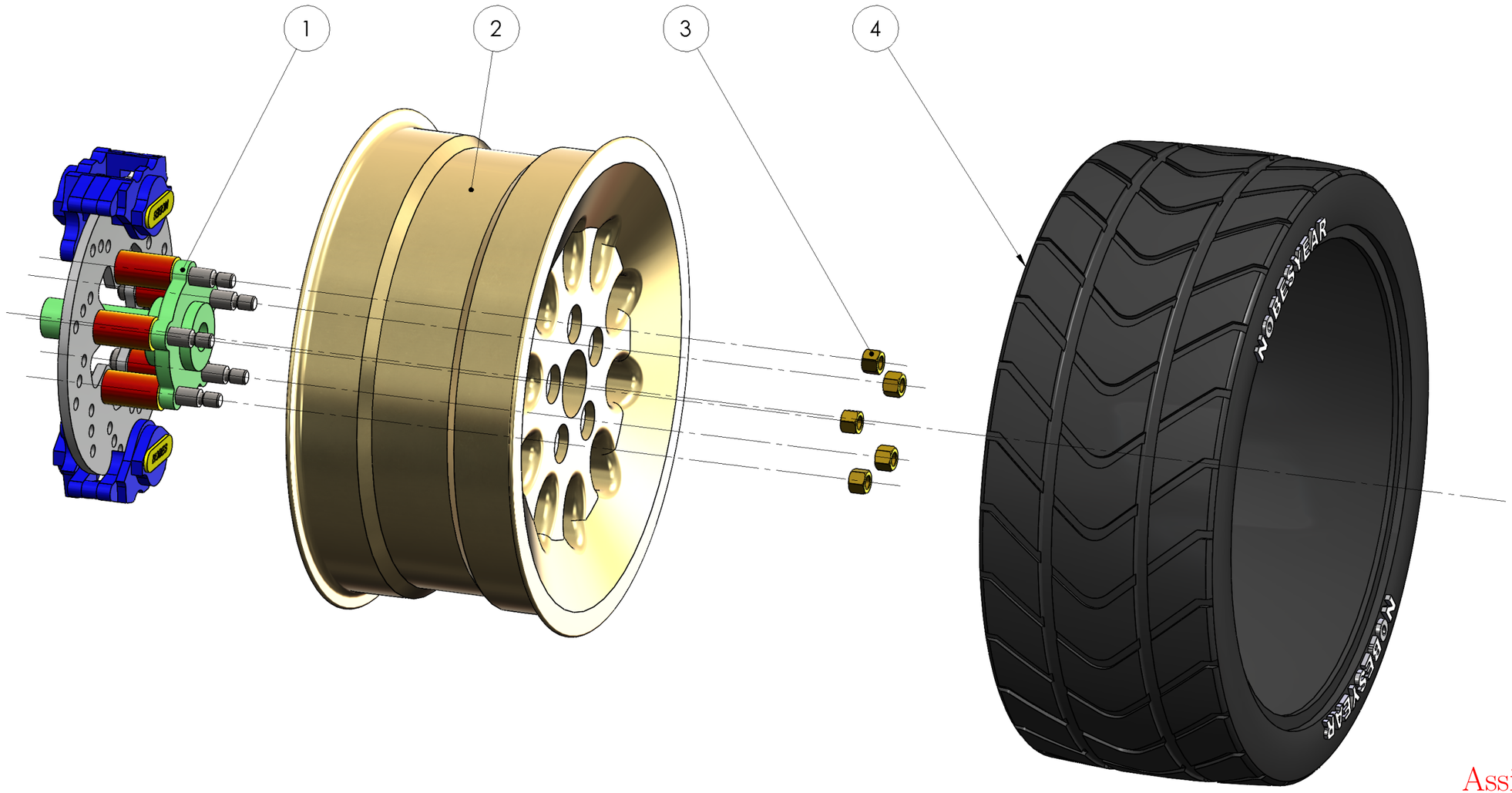
4	MecE_265_Tire	Snow Plow Car Tire	Rubber	D.S. Nobes	1



Assignment Solution

MecE 265

Instructor:
Dr DS Nobes
Fall 2021

Comments:

UNLESS OTHERWISE SPECIFIED:

DIMENSIONS ARE IN MM
TOLERANCES:
ANGULAR: ± 0.5°
LINEAR
X = ± 0.5
X.X = ± 0.1
X.XX = ± 0.025

SURFACE FINISH 0.6 µm

DO NOT SCALE DRAWING

DRAWN BY:
David S. Nobes

Lab Day	ALL
SM By	**D.S.Nobes**
TA Initials	DSN

zacha
September 28, 2021 2:35:53 PM
September 23, 2010 11:25:48 AM

The Department of Mechanical Engineering
UNIVERSITY OF ALBERTA

TITLE:
Hub, Rim, Tire Assembly

MATERIAL:
Various

FILE NAME:
MecE265_Car_Hub_Rim_Tire

SIZE	Assignment Number	REV
B	Assignment 03	2

SCALE: 1:4 | Mass: 175308.62 | SHEET 1 OF 3

ITEM NO.	SW-File Name(File Name)	SW-Title(Title)	Material	SW-Author(Author)	QTY.
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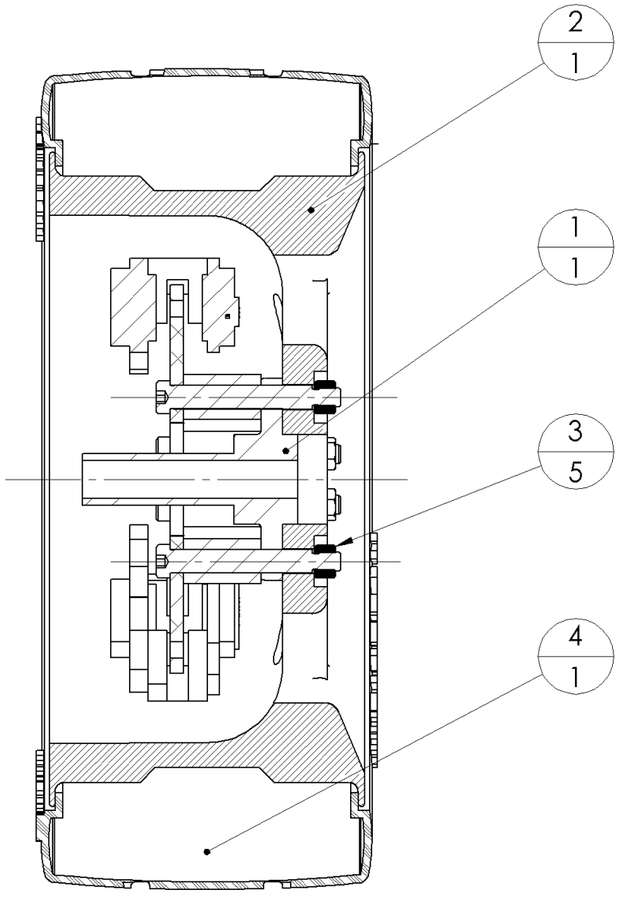
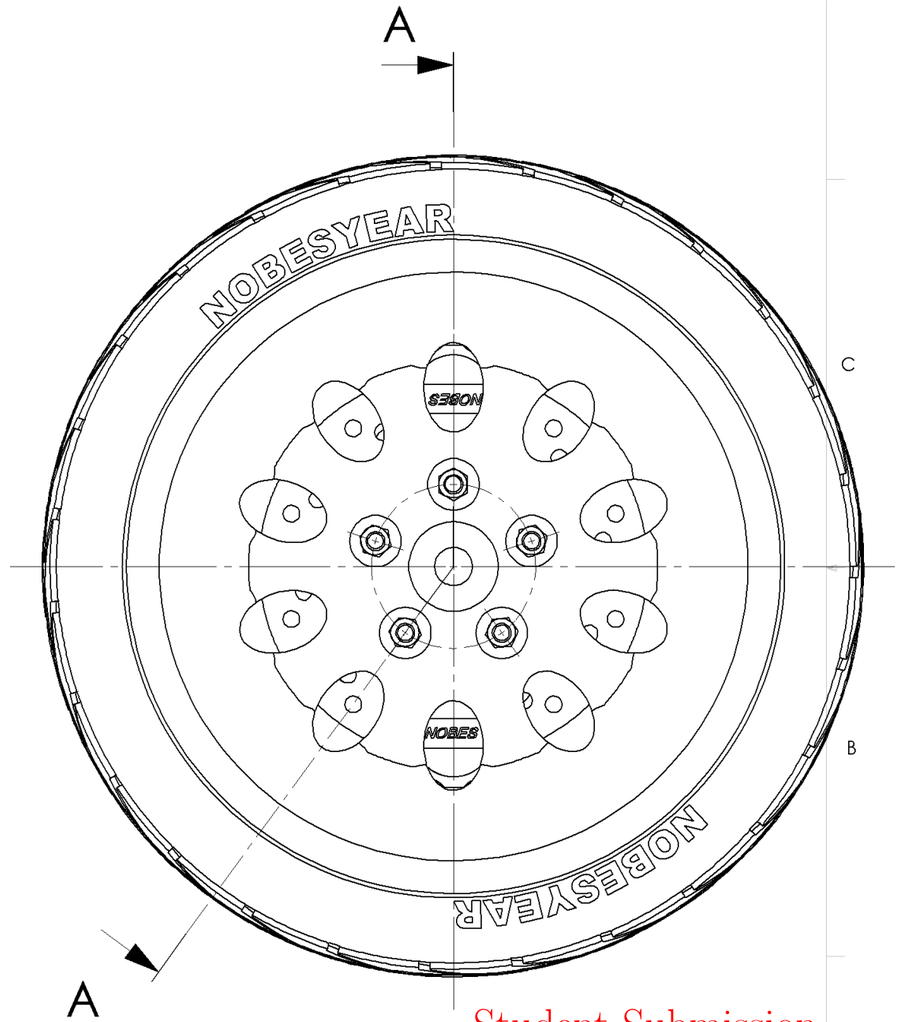
4	MecE_265_Tire	Snow Plow Car Tire	Rubber	D.S. Nobes	1



SECTION A-A



Student Submission

MecE 265 Instructor: **Dr DS Nobes** **Fall 2021** Comments:	UNLESS OTHERWISE SPECIFIED: DIMENSIONS ARE IN MM TOLERANCES: ANGULAR: ± 0.5° LINEAR X = ± 0.5 X.X = ± 0.1 X.XX = ± 0.025 SURFACE FINISH 0.6 µm DO NOT SCALE DRAWING	DRAWN BY: **David S. Nobes** Lab Day: ALL SM By: **D.S.Nobes** TA Initials: DSN zacha June 30, 2022 10:42:49 AM September 23, 2010 11:25:48 AM	The Department of Mechanical Engineering UNIVERSITY OF ALBERTA TITLE: **Hub, Rim, Tire Assembly**
MATERIAL: Various			SIZE **B** | Assignment Number: Assignment 03 | REV: 2
FILE NAME: MecE265_Car_Hub_Rim_Tire			SCALE: 1:4 | Mass: 175308.62 | SHEET 2 OF 3

Drawing View1: 51/57
Section View A-A: 39/39
DetailItem493: 40/40
SHEET TOTAL: 179/185

Correct Height
Correct Font
Correct Font Size
Correct Column Order
Correct Content

Correct Width

Snapped to Corner

ITEM NO.	SW-File Name(File Name)	SW-Title(Title)	Material	SW-Author(Author)	QTY.
1	MecE265_Car_Hub	Hub, Disk and Calaper Assembly	Various	D.S. Nobes	1
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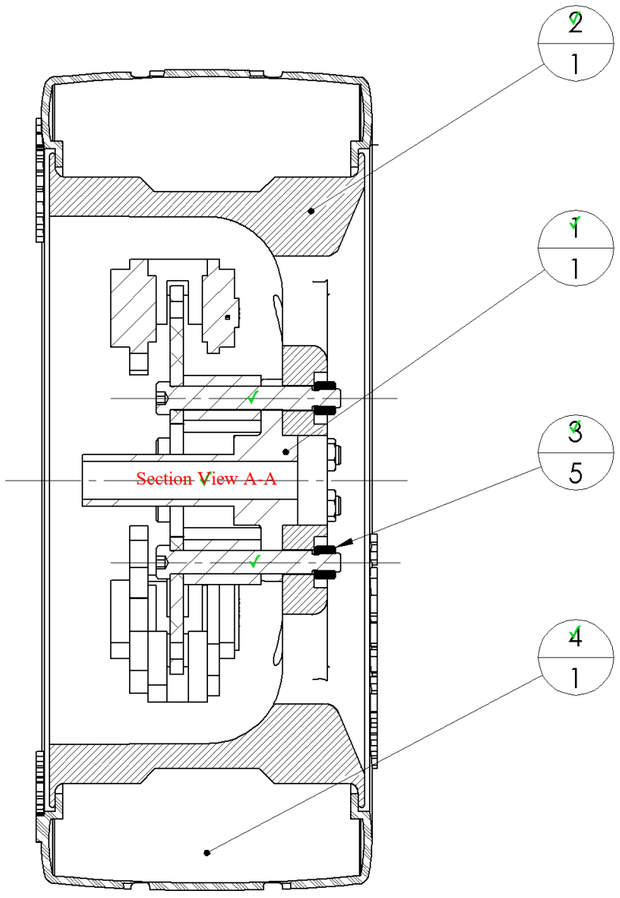
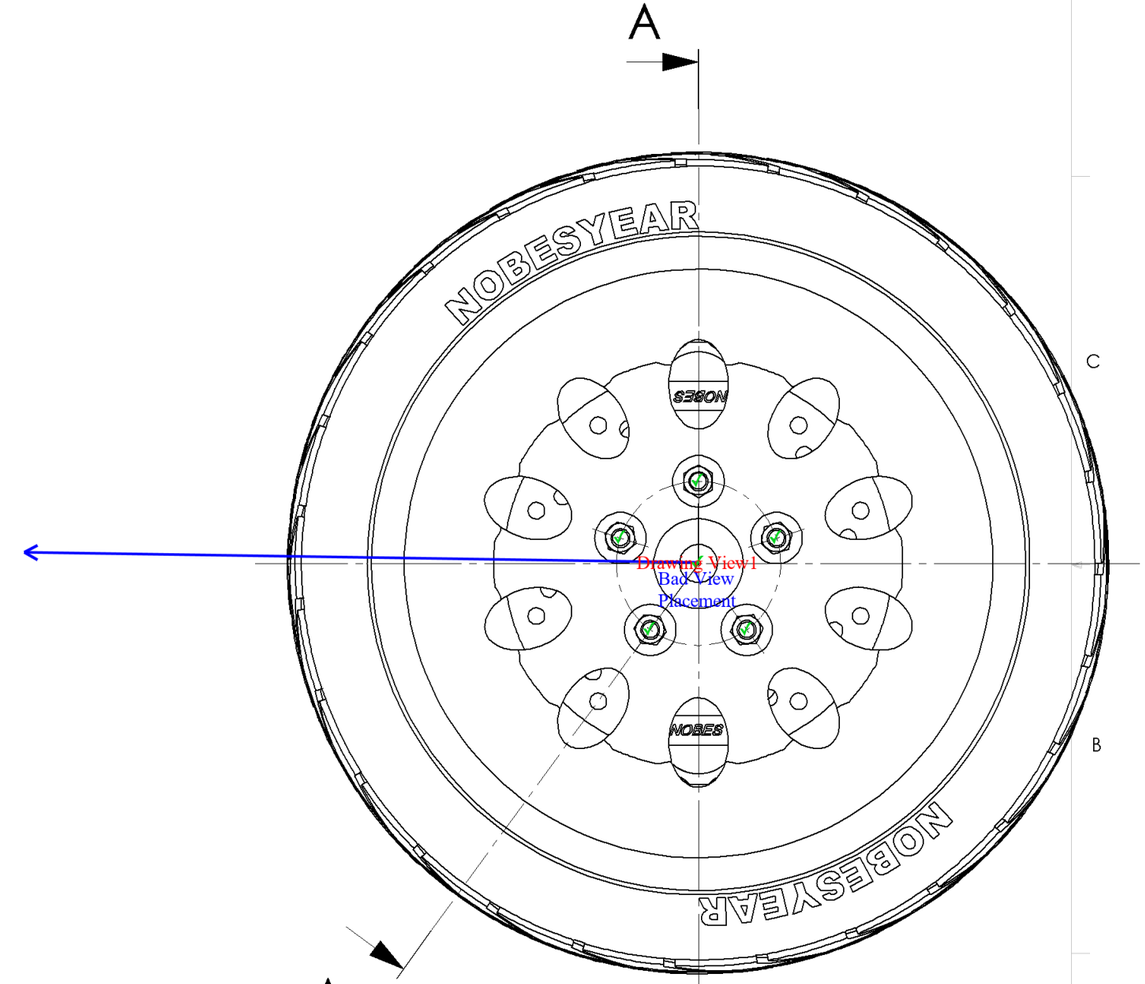
3	MecE_265_Nut	ACME HTNUT 0.500-20-D-N	Brass	Wyle E. Coyote	5
4	MecE_265_Tire	Snow Plow Car Tire	Rubber	D.S. Nobes	1

Section View A-A



Correct Tangent Line style
Correct Scale
Correct Display style

SECTION A-A



Drawing View1
Back View
Placement

Correct Tangent Line style
Correct Scale
Correct Display style

Automark of Student Submission

MecE 265	UNLESS OTHERWISE SPECIFIED:	DRAWN BY:	The Department of Mechanical Engineering UNIVERSITY OF ALBERTA
Instructor: **Dr DS Nobes Fall 2021**	DIMENSIONS ARE IN MM TOLERANCES: ANGULAR: ± 0.5° LINEAR X = ± 0.5 X.X = ± 0.1 X.XX = ± 0.025	**David S. Nobes**	TITLE: **Hub, Rim, Tire Assembly**
Comments:	SURFACE FINISH µm 0.6 DO NOT SCALE DRAWING	Lab Day: ALL SM By: **D.S.Nobes** TA Initials: DSN	SIZE **B** | Assignment Number: Assignment 03 | REV: 2
MATERIAL: Various		zacha June 30, 2022 10:42:49 AM September 23, 2010 11:25:48 AM	SCALE: 1:4 | Mass: 175308.62 | SHEET 2 OF 3
FILE NAME: MecE265_Car_Hub_Rim_Tire			

ITEM NO.	SW-File Name(File Name)	SW-Title(Title)	Material	SW-Author(Author)	QTY.
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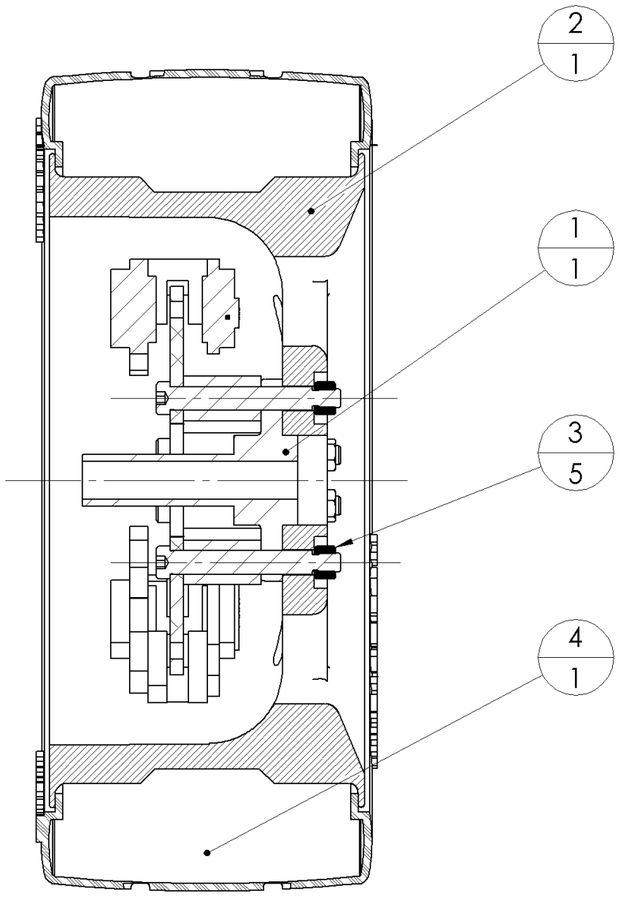
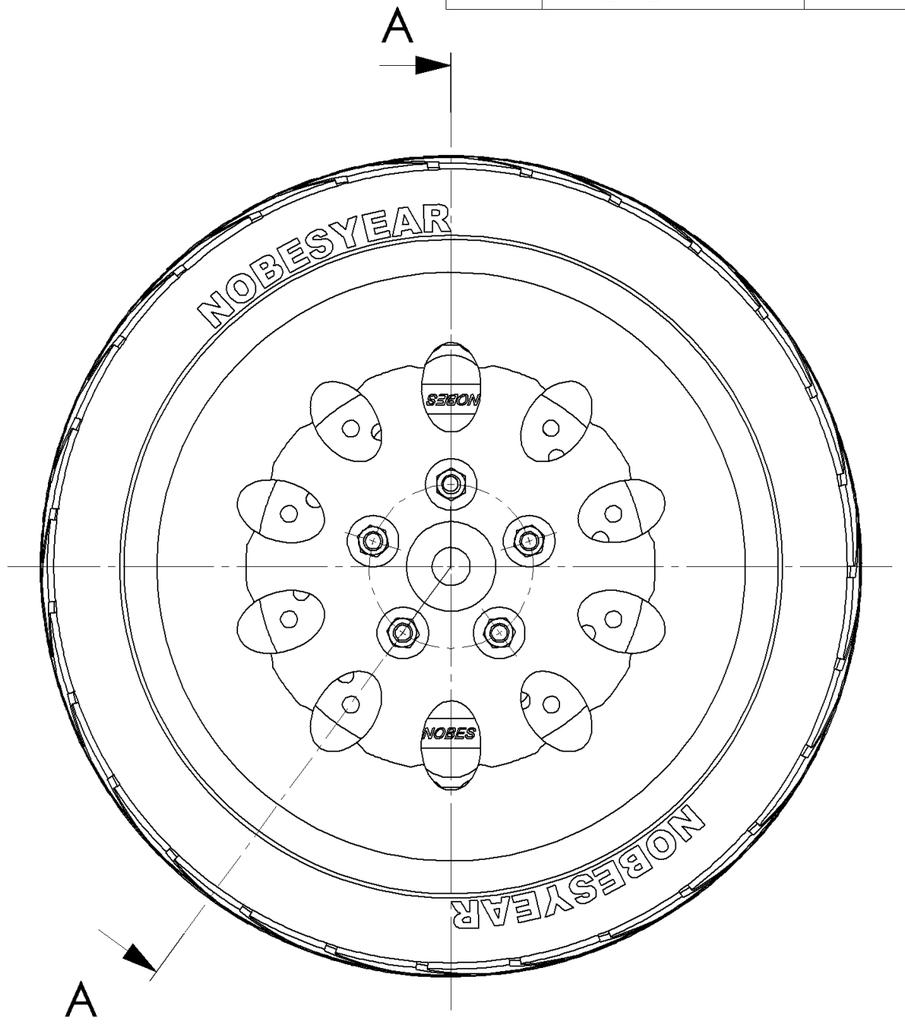
2	dsn_Rim	Custom Low Speed Snow Rim	Pure Gold	D.S.Nobes	1
3	MecE_265_Nut	ACME HTNUT 0.500-20-D-N	Brass	Wyle E. Coyote	5
4	MecE_265_Tire	Snow Plow Car Tire	Rubber	D.S. Nobes	1



SECTION A-A



Assignment Solution

MecE 265
Instructor:
Dr DS Nobes
Fall 2021
Comments:

UNLESS OTHERWISE SPECIFIED:
DIMENSIONS ARE IN MM
TOLERANCES:
ANGULAR: ± 0.5°
LINEAR
X = ± 0.5
X.X = ± 0.1
X.XX = ± 0.025
SURFACE FINISH 0.6 μm
DO NOT SCALE DRAWING

DRAWN BY:
David S. Nobes
Lab Day: ALL
SM By: **D.S.Nobes**
TA Initials: DSN
zacha
September 28, 2021 2:35:53 PM
September 23, 2010 11:25:48 AM

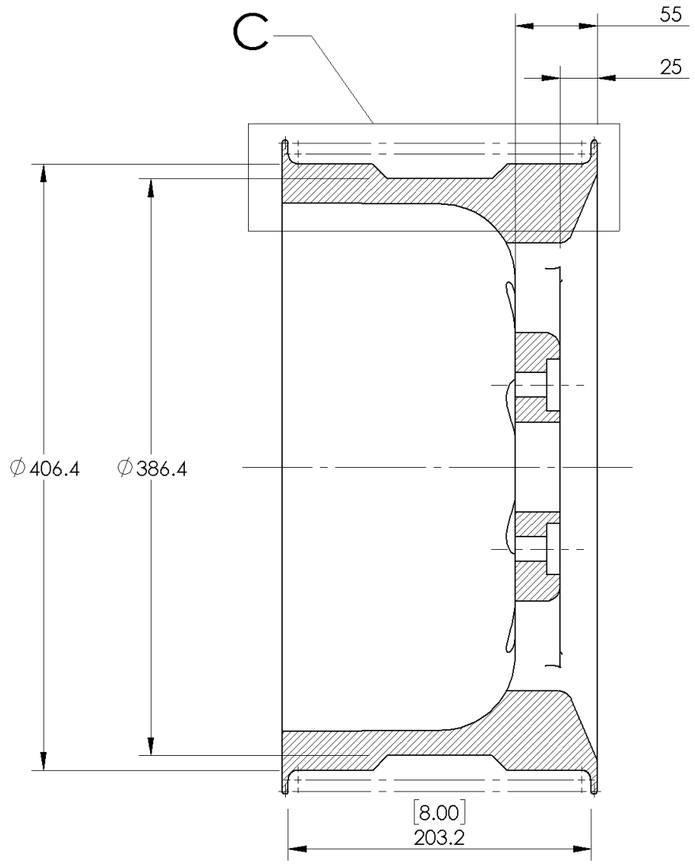
MATERIAL:
Various
FILE NAME:
MecE265_Car_Hub_Rim_Tire

The Department of Mechanical Engineering
UNIVERSITY OF ALBERTA

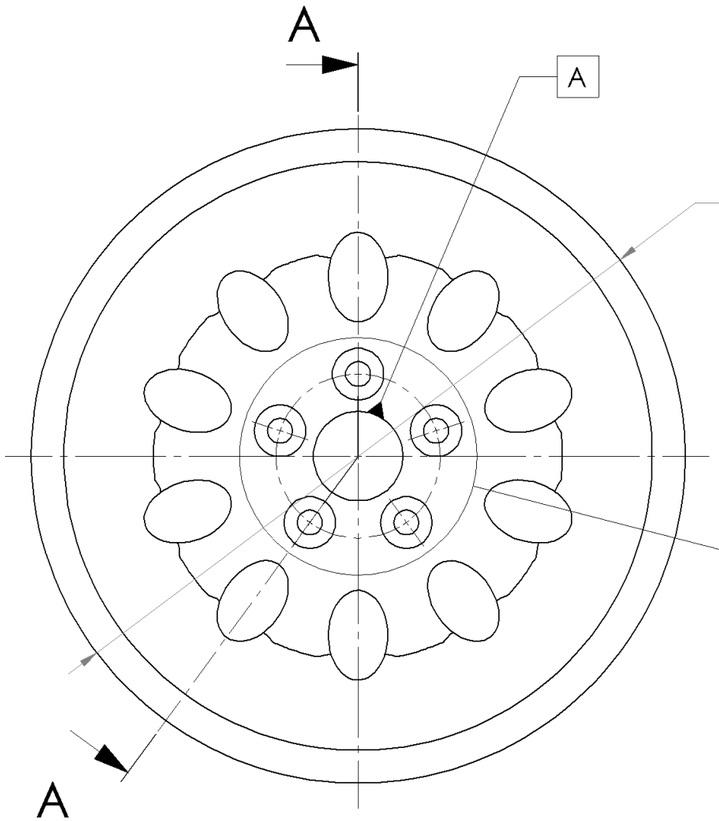
TITLE:
Hub, Rim, Tire Assembly

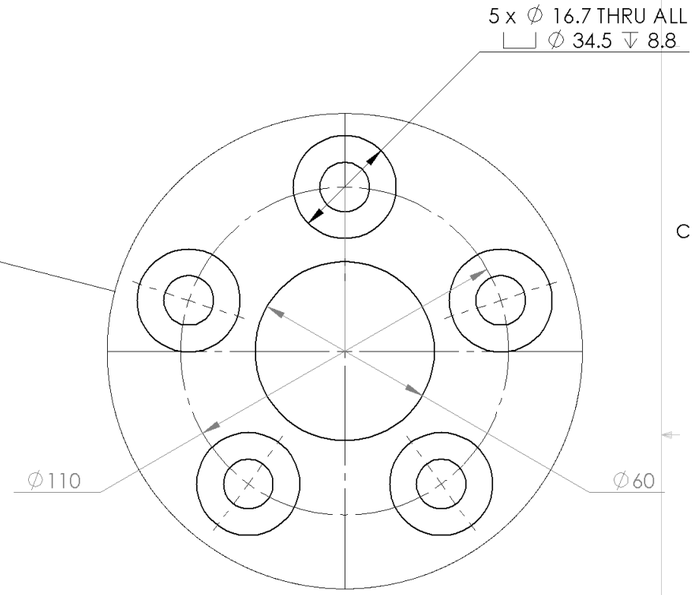
SIZE	Assignment Number	REV
B	Assignment 03	2

SCALE: 1:4 | Mass: 175308.62 | SHEET 2 OF 3

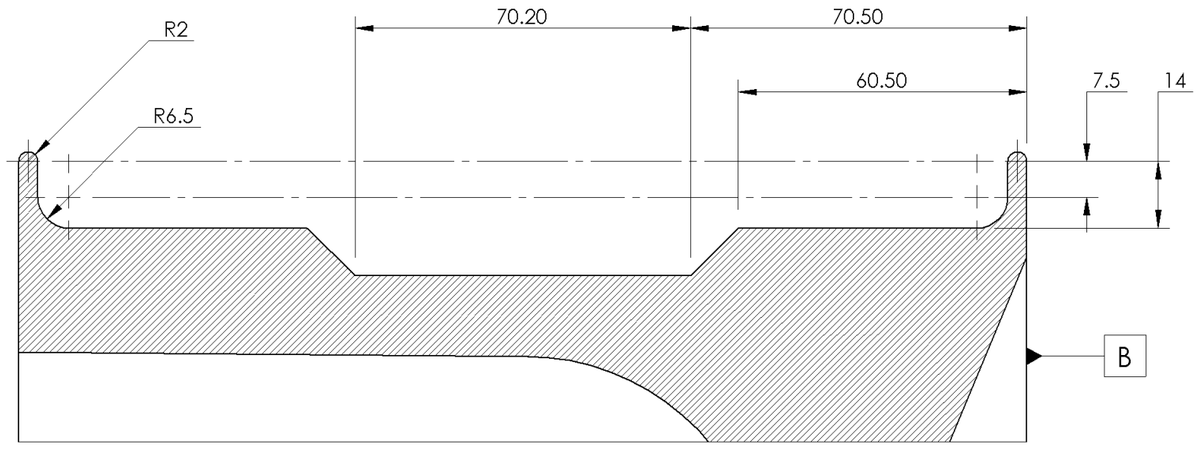


SECTION A-A





DETAIL B
SCALE 1 : 2

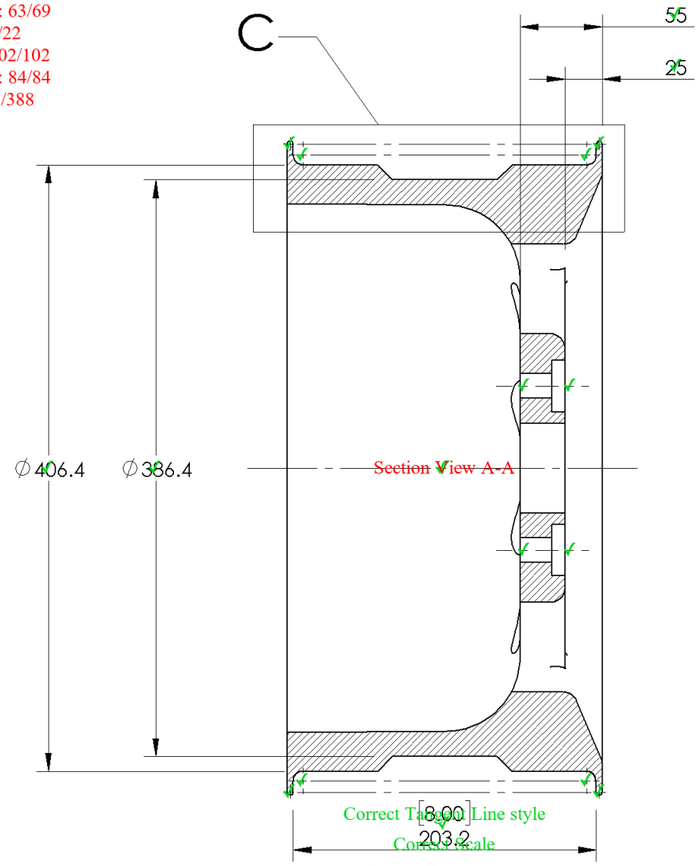


DETAIL C
SCALE 4 : 5

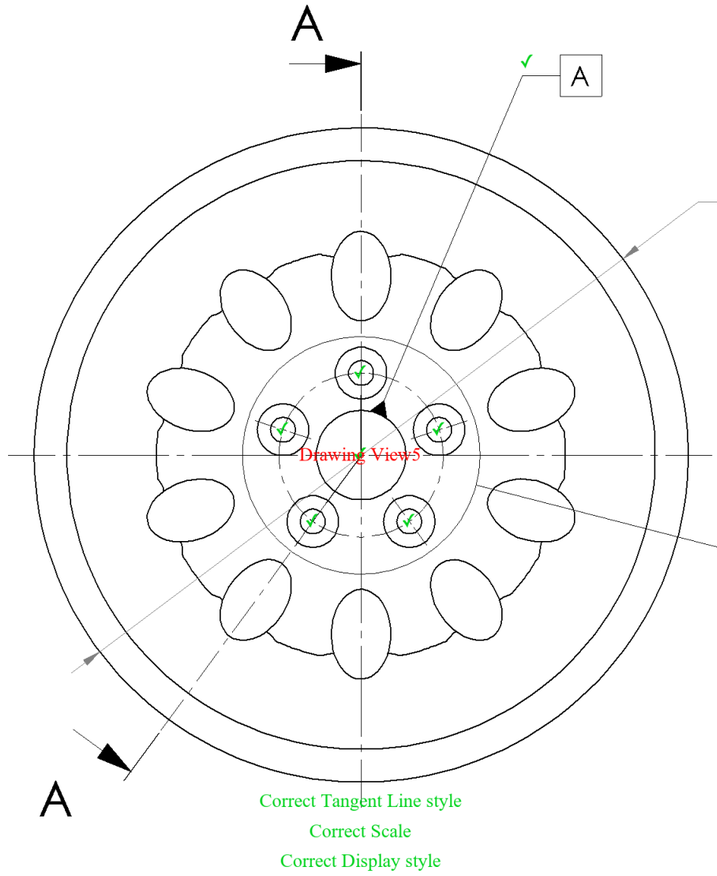
Student Submission

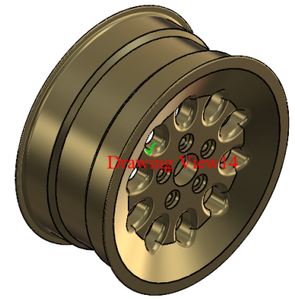
MecE 265 Instructor: **Dr DS Nobes** **Fall 2021** Comments: Only the main functional details and dimensions are shown here	UNLESS OTHERWISE SPECIFIED: DIMENSIONS ARE IN MM TOLERANCES: ANGULAR: ± 0.5° LINEAR X = ± 0.5 X.X = ± 0.1 X.XX = ± 0.025 SURFACE FINISH 0.6 μm DO NOT SCALE DRAWING	DRAWN BY: **David S. Nobes** Lab Day: ALL SM By: **D.S.Nobes** TA Initials: DSN zacha September 9, 2021 9:46:37 AM January 21, 2010 10:38:12 AM	The Department of Mechanical Engineering UNIVERSITY OF ALBERTA TITLE: Custom Low Speed Snow Rim
MATERIAL: Pure Gold			SIZE B Assignment Number Assignment 03 REV 2
FILE NAME: dsn_Rim			SCALE: 1:4 Mass: 168215.73 SHEET 3 OF 3

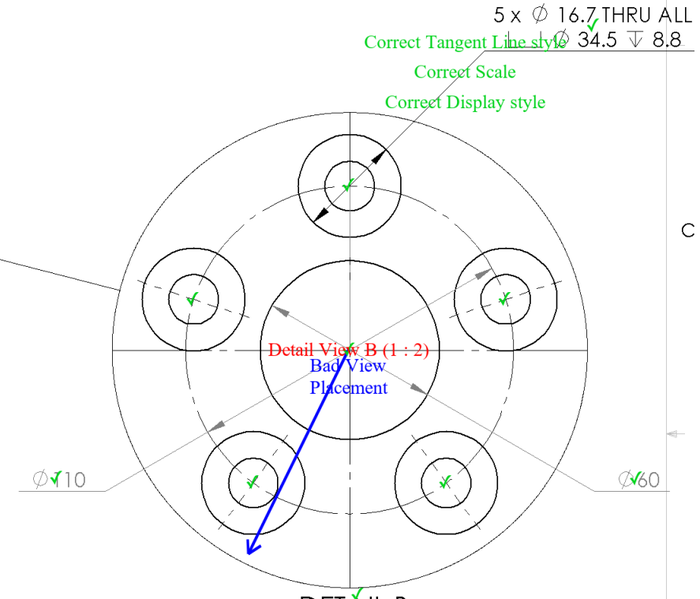
Drawing View5: 62/62
Detail View B (1 : 2): 63/69
Drawing View14: 22/22
Section View A-A: 102/102
Detail View C (4 : 5): 84/84
SHEET TOTAL: 382/388



SECTION A-A

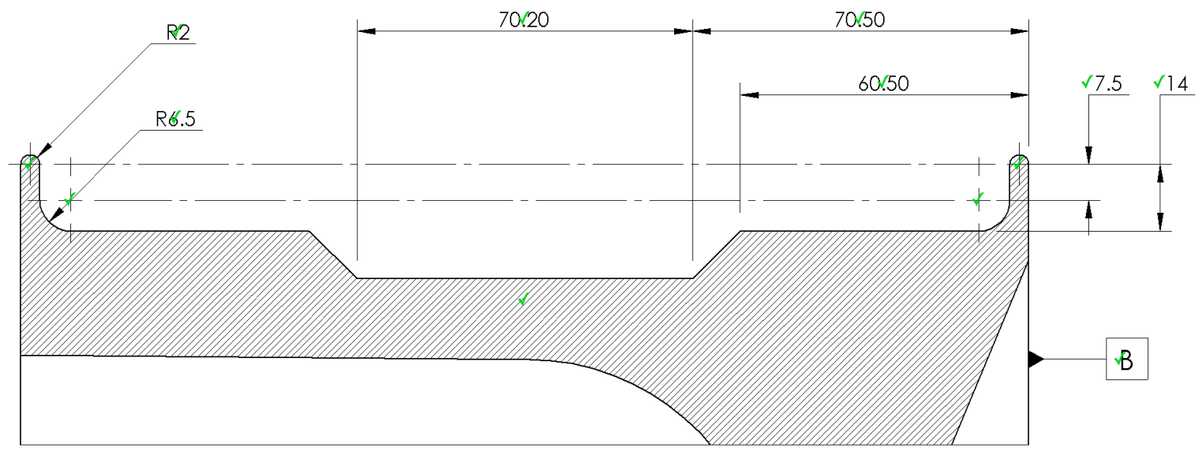






DETAIL B
SCALE 1 : 2

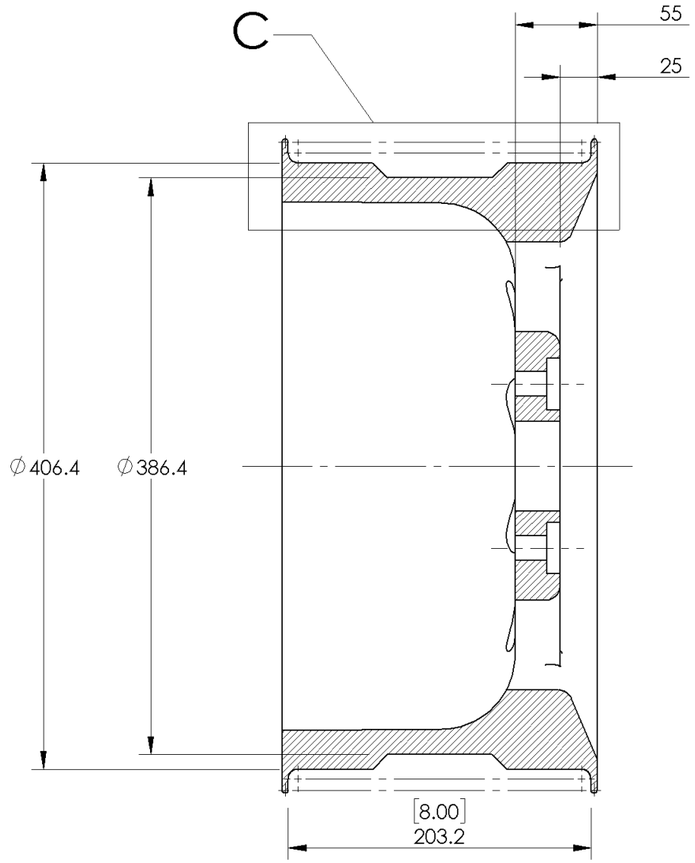
Correct Tangent Line style
Correct Scale
Correct Display style



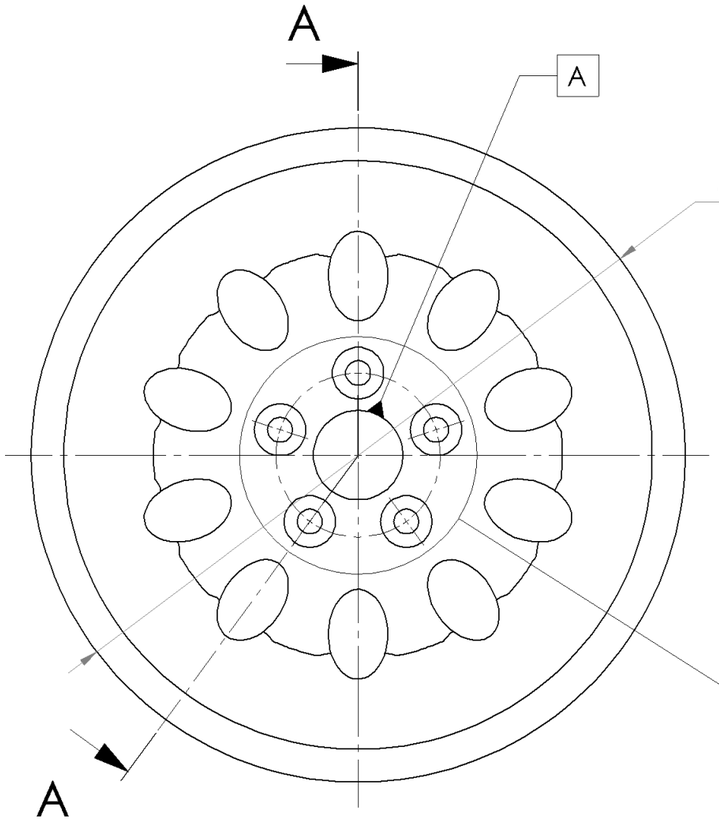
DETAIL C
SCALE 4 : 5

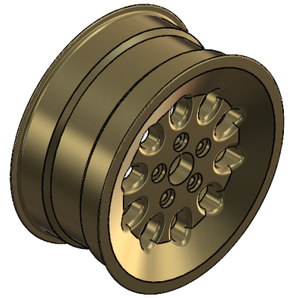
Automark of Student Submission

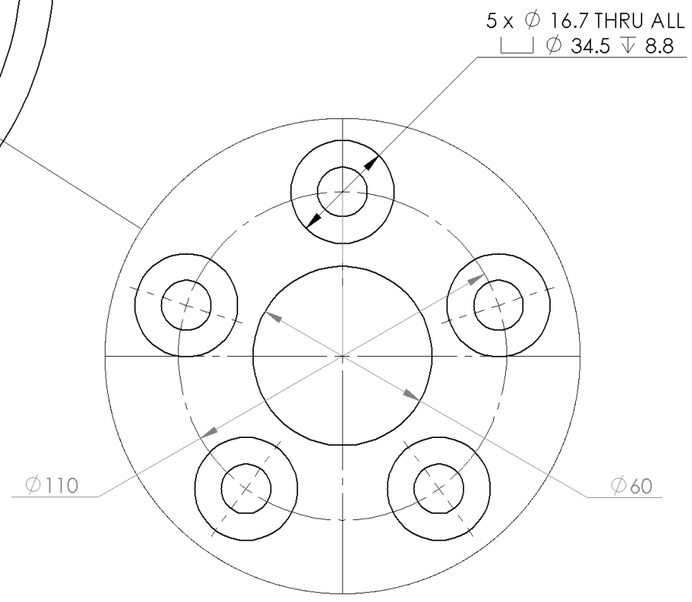
MecE 265	UNLESS OTHERWISE SPECIFIED:	DRAWN BY:	The Department of Mechanical Engineering, UNIVERSITY OF ALBERTA
Instructor: **Dr DS Nobes** **Fall 2021**	DIMENSIONS ARE IN MM TOLERANCES: ANGULAR: ± 0.5° LINEAR X = ± 0.5 X.X = ± 0.1 X.XX = ± 0.025	**David S. Nobes**	TITLE: **Custom Low Speed Snow Rim**
Comments: Only the main functional details and dimensions are shown here	SURFACE FINISH µm 0.6 DO NOT SCALE DRAWING	Lab Day: ALL SM By: **D.S.Nobes** TA Initials: DSN	SIZE **B** · Assignment Number: Assignment 03 · REV: 2
MATERIAL: Pure Gold		zacha September 9, 2021 9:46:37 AM January 21, 2010 10:38:12 AM	SCALE: 1:4 · Mass: 168215.73 · SHEET 3 OF 3
FILE NAME: dsn_Rim			



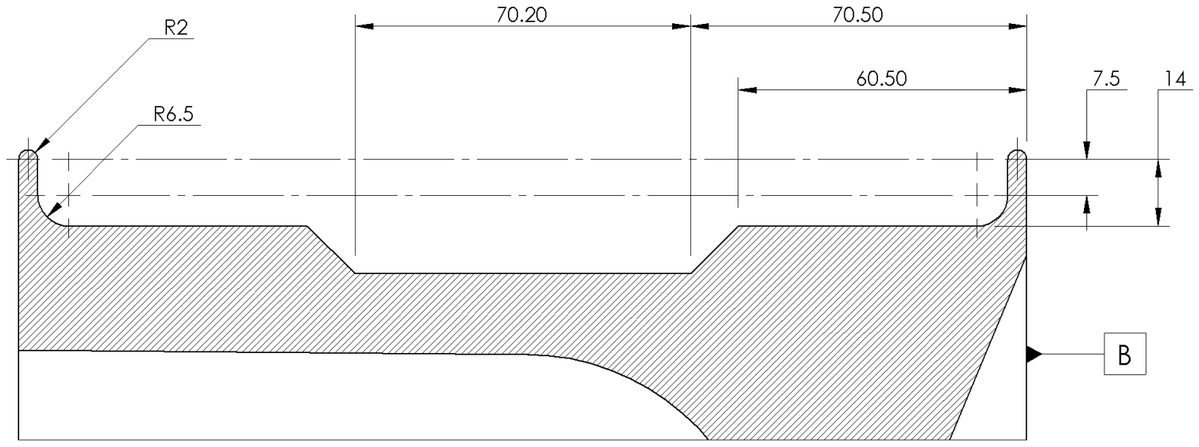
SECTION A-A







DETAIL B
SCALE 1 : 2



DETAIL C
SCALE 4 : 5

Assignment Solution

MecE 265 Instructor: **Dr DS Nobes Fall 2021** Comments: Only the main functional details and dimensions are shown here	UNLESS OTHERWISE SPECIFIED: DIMENSIONS ARE IN MM TOLERANCES: ANGULAR: ± 0.5° LINEAR X = ± 0.5 X.X = ± 0.1 X.XX = ± 0.025 SURFACE FINISH µm 0.6 DO NOT SCALE DRAWING	DRAWN BY: **David S. Nobes** Lab Day: ALL SM By: **D.S.Nobes** TA Initials: DSN zacha September 9, 2021 9:46:37 AM January 21, 2010 10:38:12 AM	The Department of Mechanical Engineering UNIVERSITY OF ALBERTA TITLE: **Custom Low Speed Snow Rim**
MATERIAL: Pure Gold FILE NAME: dsn_Rim			SIZE **B** · Assignment Number: Assignment 03 · REV: 2 SCALE: 1:4 · Mass: 168215.73 · SHEET 3 OF 3