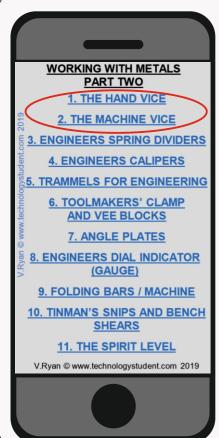
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THE HAND VICE AND **MACHINE VICE**

TO ANSWER ALL THE QUESTIONS YOU WILL NEED TO DOWNLOAD THE 'WORKING WITH METALS -PART TWO' APP, FROM THE **INTERACTIVE MOBILE APP SECTION OF** www.technologystudent.com

LINK

http://www.technologystudent.com/mobapps/engineering_equipment1.pdf

Once you have downloaded the App, you can use it to navigate the website. You may need to follow the links on each page of the App, to research / complete answers to all the questions.

ARE YOU READY? USE THE MOBILE App!!

4	
1	WHEN IS A HAND VICE USED TO HOLD MATERIAL?
	Two sample hand vices are seen opposite.
-	



EXPLAIN WHY A MACHINE VICE IS BEING USED TO SECURE MATERIAL ON THE DRILLING MACHINE, AS SEEN BELOW. Write your answer in the next box. V.Ryan @ 2019 V.Ryan @ 2019

WRITE YOUR ANSWER HERE.

WHAT IS THE DIFFERENCE BETWEEN THE FOLLOWING MACHINE VICES: **HEAVY DUTY, MEDIUM DUTY, LIGHT DUTY**

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ENGINEERS SPRING DIVIDERS AND ENGINEERS CALIPERS

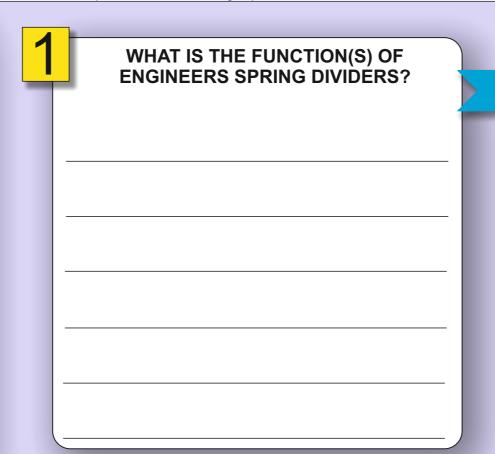
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SKETCH ONE USE / FUNCTION OF **ENGINEERS SPRING DIVIDERS.**

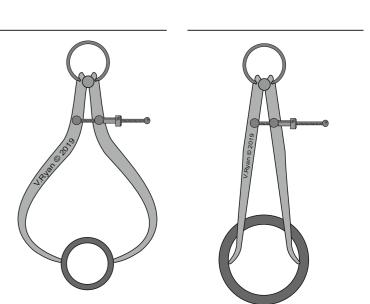
WITH THE AID OF A SKETCH, DESCRIBE HOW 'ODD LEG CALIPERS' CAN BE USED TO 'SCRIBE' A PARALLEL LINE.

Sketch

Notes

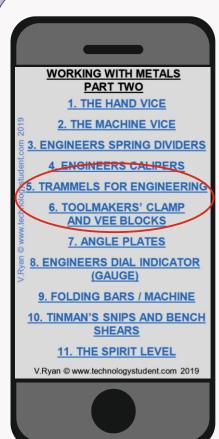
STUDY HOW THESE ODD LEG CALIPERS ARE BEING USED. WHAT IS HAPPENING?

NAME THE TWO CALIPERS SHOWN HERE.



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TRAMMELS AND THE TOOLMAKER'S CLAMP

TO ANSWER ALL THE QUESTIONS YOU WILL NEED TO DOWNLOAD THE 'WORKING WITH METALS -PART TWO' APP, FROM THE **INTERACTIVE MOBILE APP SECTION OF** www.technologystudent.com

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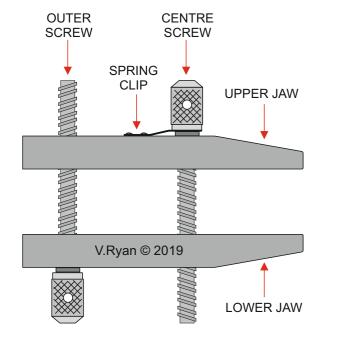
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ARE YOU READY? USE THE MOBILE App!!

4				
1	USING NOTES AND A SKETCH, DESCRIBE HOW A TRAMMEL CAN BE USED TO DRAW / SCRIBE, AN ARC ON SHEET METAL.			

A TOOLMAKER'S CLAMP IS SHOWN BELOW. USING NOTES AND A SKETCH, EXPLAIN HOW THE TOOLMAKER'S CLAMP CAN BE USED TO HOLD / SECURE METAL, DURING PRACTICAL WORK.

Sketch



<u>OKCION</u>	<u>Notes</u>
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HELPFUL LINK:

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WORKING WITH METALS PART TWO
1. THE HAND VICE
2. THE MACHINE VICE
3. ENGINEERS SPRING DIVIDERS
4. ENGINEERS CALIPERS
5. TRAMMELS FOR ENGINEERING
6. TOOLMAKERS' CLAMP AND VEE BLOCKS
7. ANGLE PLATES
7. ANGLE PLATES 8. ENGINEERS DIAL INDICATOR (GAUGE)
9. FOLDING BARS / MACHINE
10. TINMAN'S SNIPS AND BENCH SHEARS
11. THE SPIRIT LEVEL
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ENGINEERS SPRING DIVIDERS AND ENGINEERS CALIPERS

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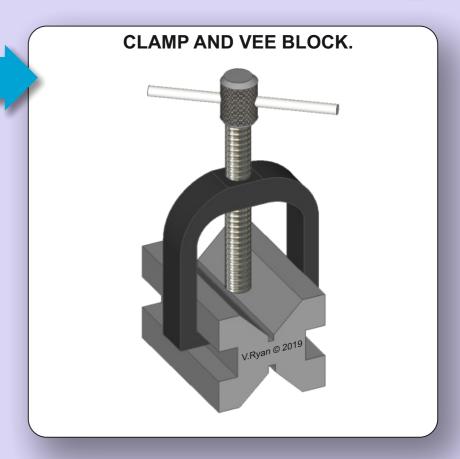
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4	
1	WHAT ARE CLAMPS WITH
	VEE BLOCKS? NAME THE MATERIALS
	THEY ARE MANUFACTURED FROM.
	Example of a Clamp and Vee Block seen opposite.
-	
-	
_	
_	
-	



ADD A VERY BRIEF DESCR	PTION TO EACH SKETCH.	
	1 1 1	

PRODUCE TWO SKETCHES, THAT SHOW DIFFERENT WAYS CLAMPS AND VEE BLOCKS CAN BE USED IN A WORKSHOP SITUATION.

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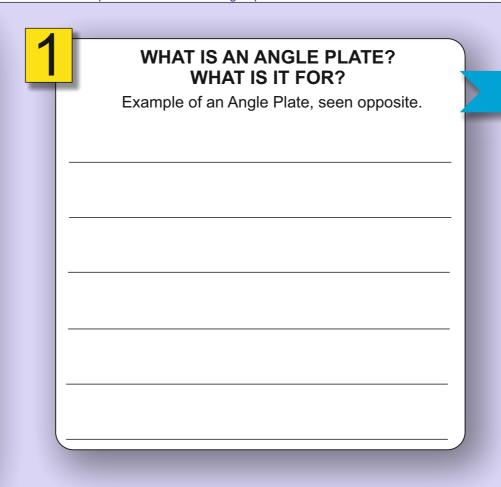
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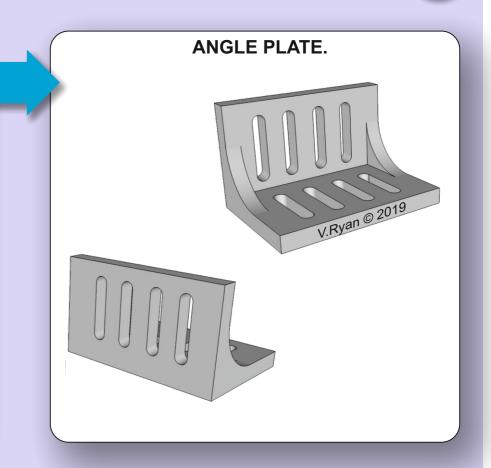
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AN ANGLE PLATE, BOLTS AND SUPPORTING PACKAGING, IS SEEN IN USE BELOW. DESCRIBE HOW AND WHY THEY ARE BEING USED IN THIS **WORKSHOP / ENGINEERING SITUATION.** DRILL CHUCK DRILL BIT ANGLE PLATE STEEL BEING DRILLED **SECURING NUT AND BOLT** SUPPORTING PACKING V.Ryan © 2019 DRILLING TABLE

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WORKING WITH METALS PART TWO 1. THE HAND VICE 4. ENGINEERS CALIPERS **AND VEE BLOCKS**

9. FOLDING BARS / MACHINE

SHEARS

11. THE SPIRIT LEVEL

ENGINEERS SPRING DIVIDERS AND ENGINEERS CALIPERS

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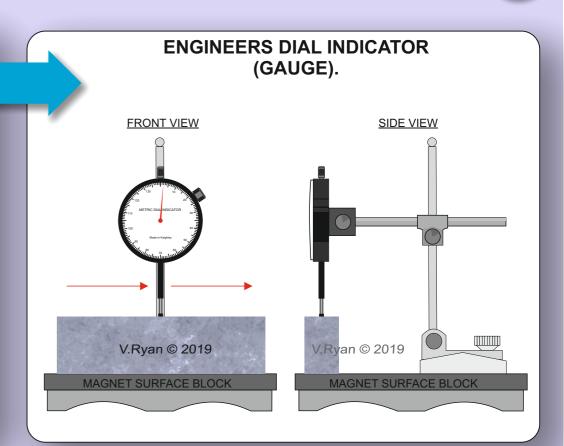
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ARE YOU READY? USE THE MOBILE App!!

4	
1	DESCRIBE THE GENERAL USE / PURPOSE OF THE ENGINEERS DIAL INDICATOR
	Example of a Dial Indicator seen opposite.
-	
(.	



LABEL THE PARTS OF THE ENGINEERS DIAL INDICATOR.

USING A SKETCH AND NOTES, EXPLAIN HOW A DIAL INDICATOR MOUNTED ON A MAGNETIC BASE, CAN BE USED IN CONJUNCTION WITH A CENTRE LATHE.

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WORKING WITH METALS PART TWO 1. THE HAND VICE 2. THE MACHINE VICE 4. ENGINEERS CALIPERS . TRAMMELS FOR ENGINEERING **AND VEE BLOCKS**

7. ANGLE PLATES

8. ENGINEERS DIAL INDICATOR

9. FOLDING BARS / MACHIN

11. THE SPIRIT LEVEL

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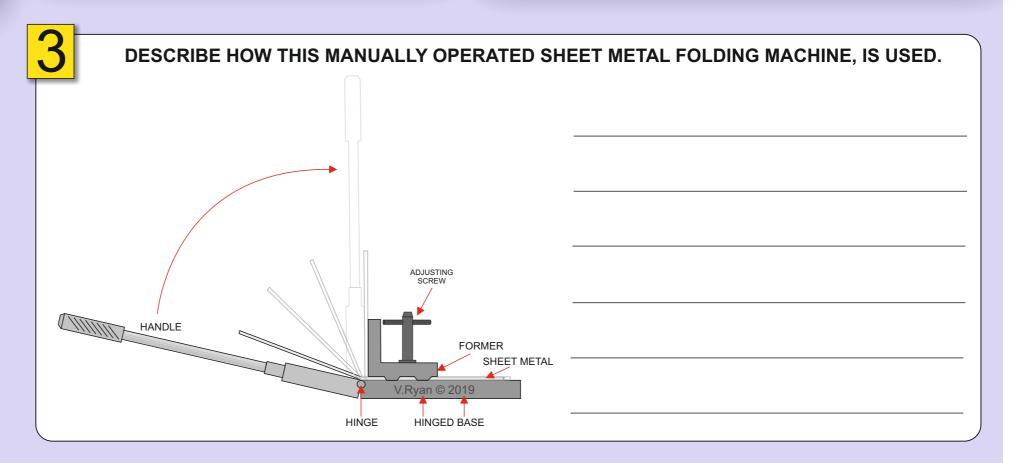
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ARE YOU READY? USE THE MOBILE App!!

DESCRIBE HOW A SIMPLE SET OF FOLDING BARS CAN BE USED TO FOLD A SMALL PIECE OF SHEET METAL TO A 90 DEGREE ANGLE. Place your sketch in the next box.

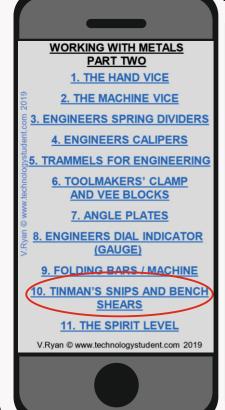
YOUR SKETCH.

WHAT IS THE FUNCTION OF A MANUALLY **OPERATED SHEET METAL FOLDING** MACHINE? INCLUDE ONE ADVANTAGE COMPARED TO FOLDING BARS.



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