NAME _____ _____ **DATE** ___ / _____ / _____

1
A part is to be machined to a length of 5.504" plus or minus 0.006". Which of the following dimensions is not acceptable?

A 5.496
B 5.503
C 5.498
D 5.510
E All would be acceptable

2
A precise reference plane or surface used in precision measurement is called a:

A Combination Set
B Surface Plate
C Surface Gage
D Parallel

3
HMIS stands for:

A Hazardous Material Inspection Sheets
B Hazardous Materials Identification System
C Hazardous Materials Information System
D High-speed Machining Information System

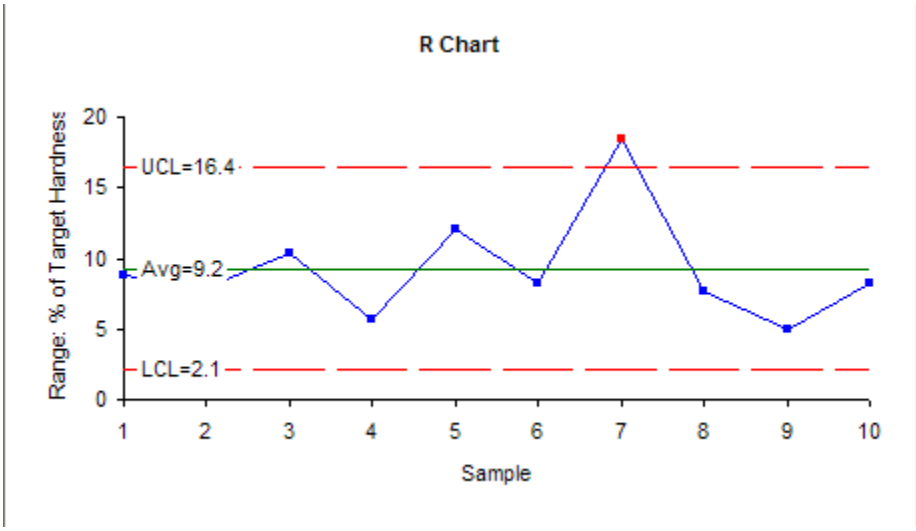
4
How would "Five Hundred Thousandths of an Inch" be written as a three-place decimal?

A .005
B .0500
C .050
D .500

5
SDS stands for:

A Shop Disposal System
B System Diagnostic Sheet
C Safety Data Sheet
D Safety Data System

6
The R chart below shows we are making consistent parts:



A True B False

7
The amount of permissible variation on part size and shape is known as:

A Allowance
B Range
C Tolerance
D Variation Value

8
What tool would be most accurate for checking perpendicularity during a relaxed check?

A Combination Square
B Dial Caliper
C Precision or Solid Square
D Hook Rule

9
A type of metal that contains no iron and is not magnetic is:

A Ferrous Metal
B Super Alloy
C Cast Steel
D Nonferrous Metal

10
1070 plain carbon steel contains ___ carbon than 1020 plain carbon steel.

A more
B an equal amount
C less
D The answer cannot be determined based on the provide information

11
SAE 1050 steel has what percentage of carbon content:

A 50%
B 5%
C .50%
D .05%

12
A type of hardening where only an outer layer of material is hardened is called:

A Surface Hardening
B Annealing
C Direct Hardening
D Indirect Hardening

13
A process that uses some type of material containing solid carbon to add carbon to the outer layer of steel is called:

A Tempering
B Carburizing
C Annealing
D Normalizing

14
This process returns metals to their original, unhardened condition:

A Quenching
B Tempering
C Nitriding
D Annealing

15
A negative consequence of hardening metal is that it becomes:

A Brittle
B Un-cuttable
C Tough
D Fragile

16
The ___ and __ scales both measure the hardness of a material.

A Smith & Wesson
B Brinnel & Rockwell
C Normal & Quench
D Carbon & Tempered

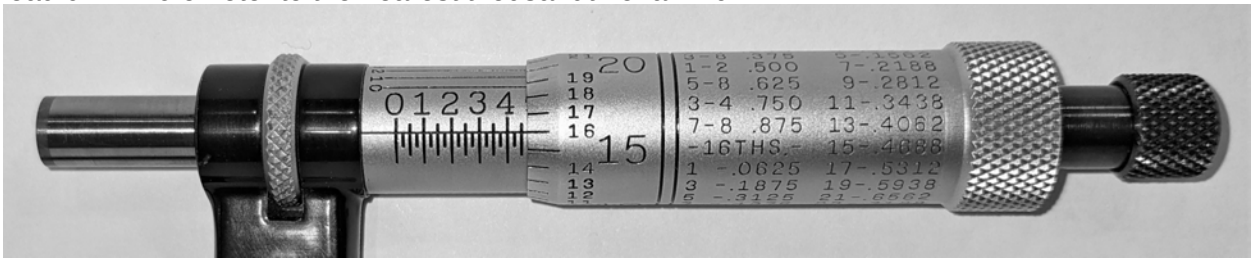
17

Using a standard 81-piece gage block set, which combination of gage blocks would be selected to make a gage block build of 2.8337"?

A 0.103, 0.1307, 0.600, 2.000
B 0.1337, 0.800, 2.000
C 0.1007, 0.033, 0.600, 2.000
D 0.1007, 0.133, 0.600, 2.000

18

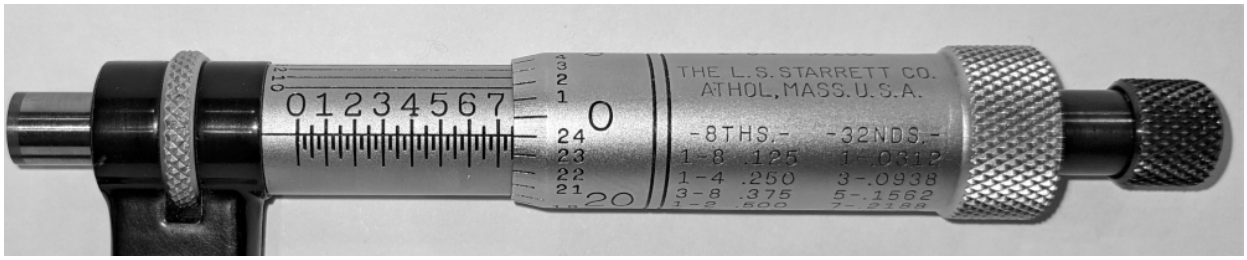
Read 0-1" micrometer to the nearest thousandth of an inch.



A .416
B .441
C .466
D .341

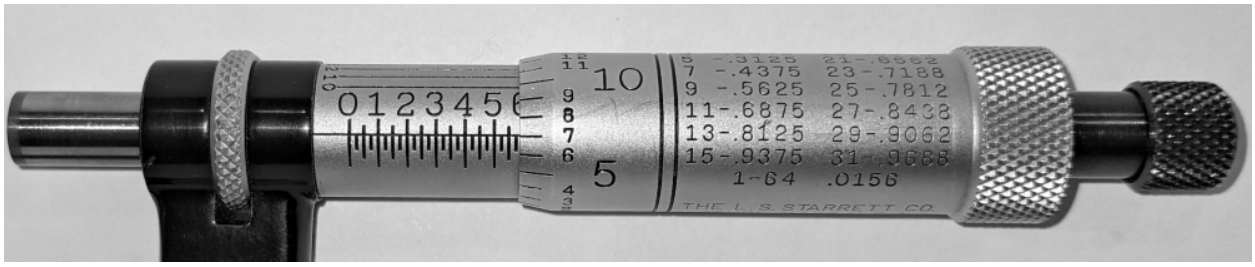
19

Read 0-1" micrometer to the nearest thousandth of an inch.



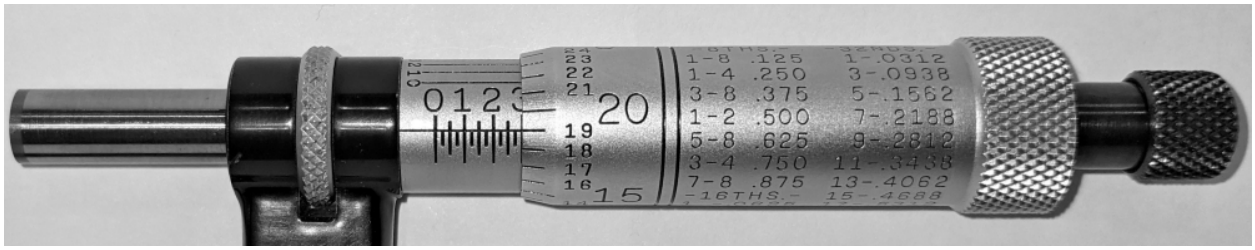
A .749
B .724
C .751
D .774

20
Read 0-1" micrometer to the nearest thousandth of an inch.



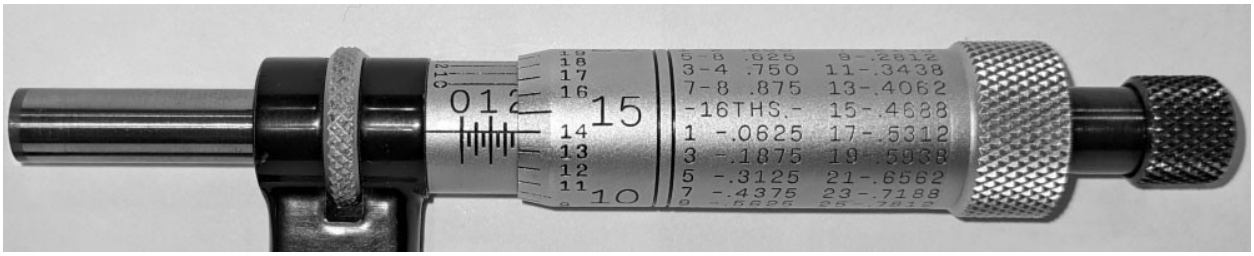
A .577
B .582
C .607
D .557

21
Read 0-1" micrometer to the nearest thousandth of an inch.



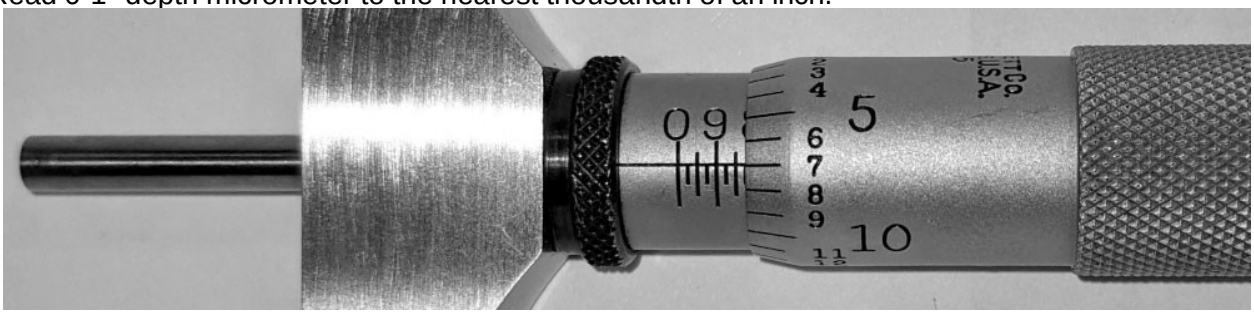
A .294
B .319
C .269
D .219

22
Read 0-1" micrometer to the nearest thousandth of an inch.



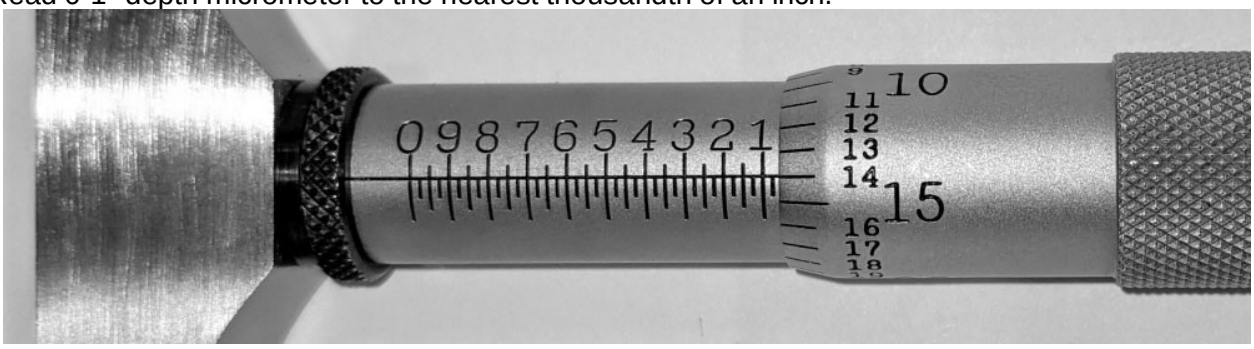
A .214
B .164
C .189
D .114

23
Read 0-1" depth micrometer to the nearest thousandth of an inch.



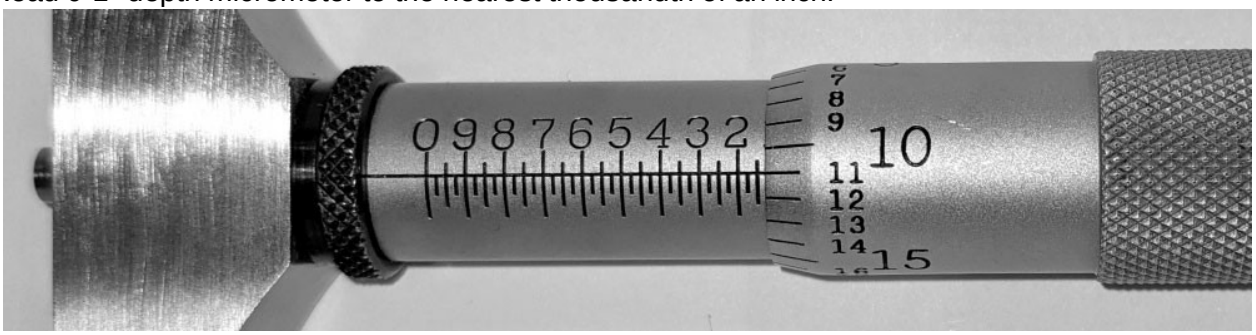
A .982
B .957
C .807
D .832

24
Read 0-1" depth micrometer to the nearest thousandth of an inch.



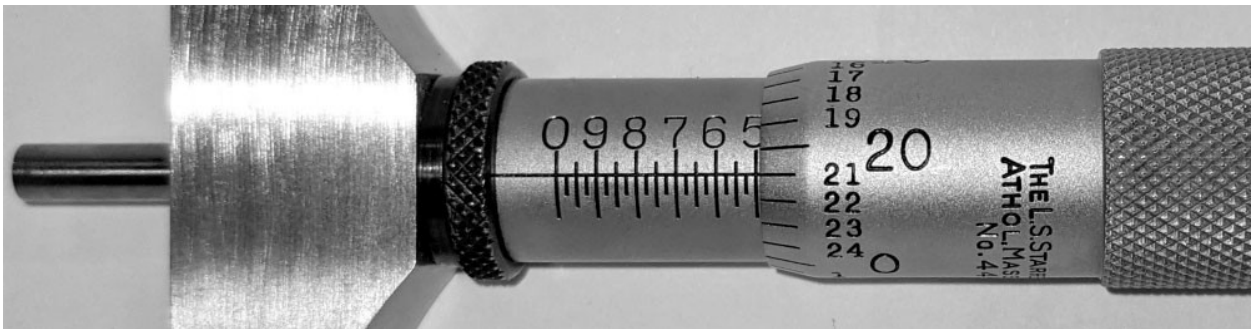
A .114
B .139
C .064
D .039

25
Read 0-1" depth micrometer to the nearest thousandth of an inch.



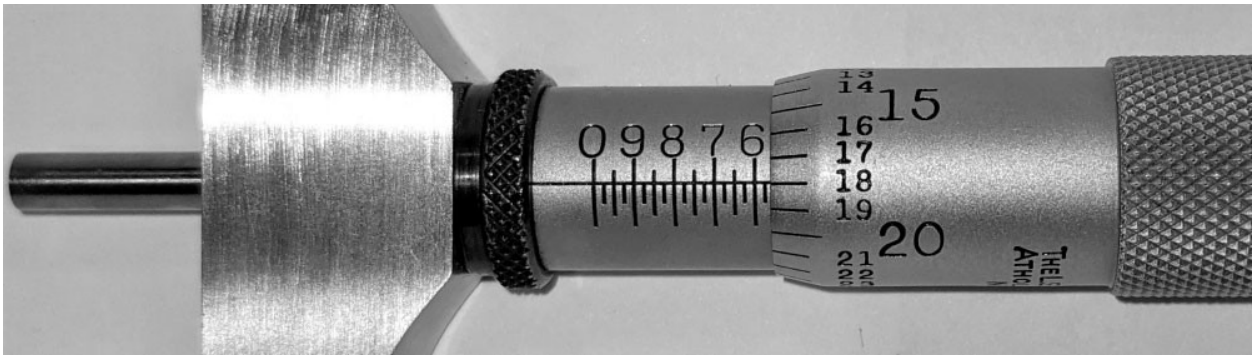
A .036
B .261
C .211
D .136

26
Read 0-1" depth micrometer to the nearest thousandth of an inch.



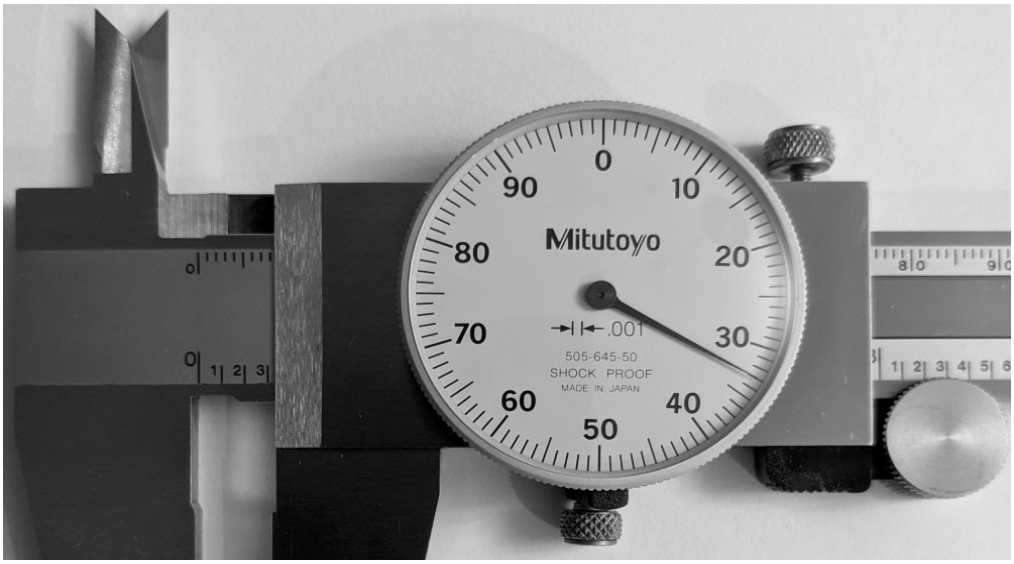
A .521
B .496
C .471
D .546

27
Read 0-1" depth micrometer to the nearest thousandth of an inch.



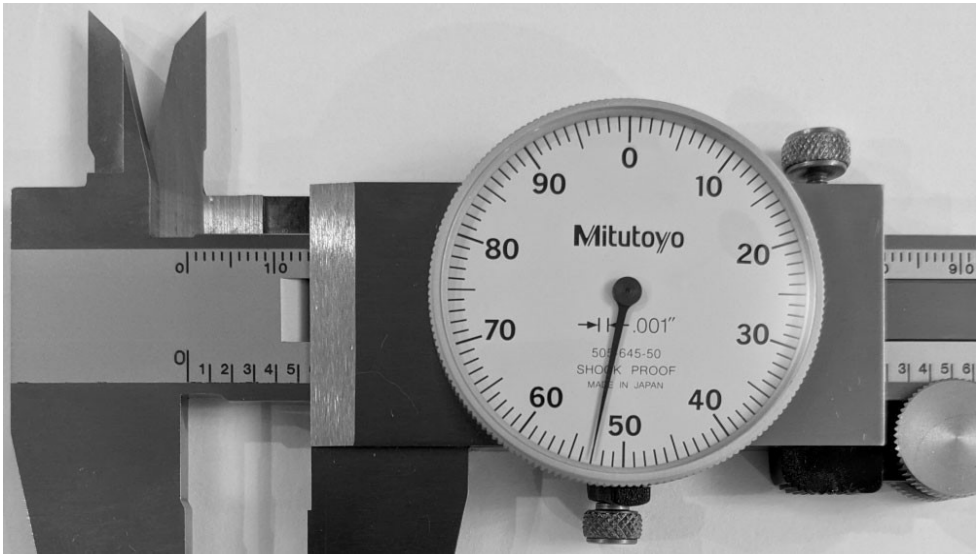
A .568
B .618
C .643
D .518

28
Read to the nearest thousandth of an inch.



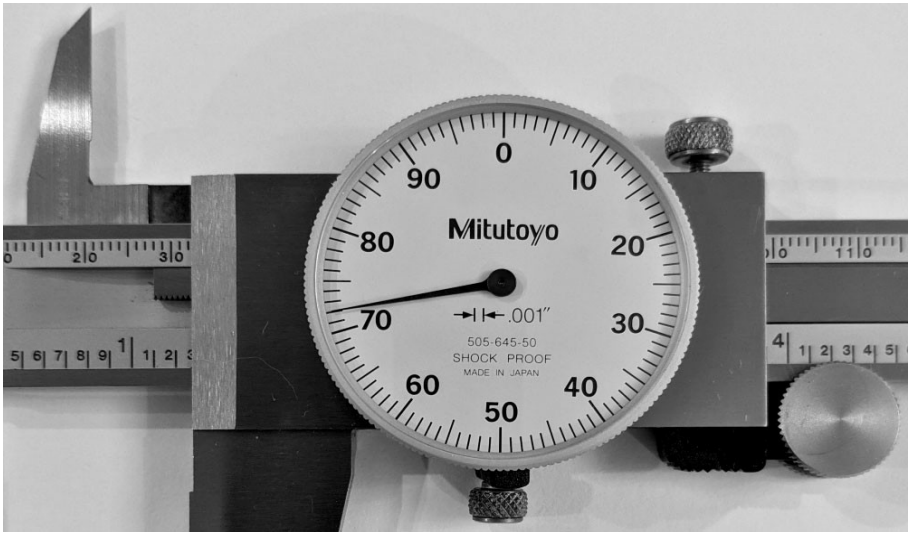
A .347
B .233
C .333
D .247

29
Read to the nearest thousandth of an inch.



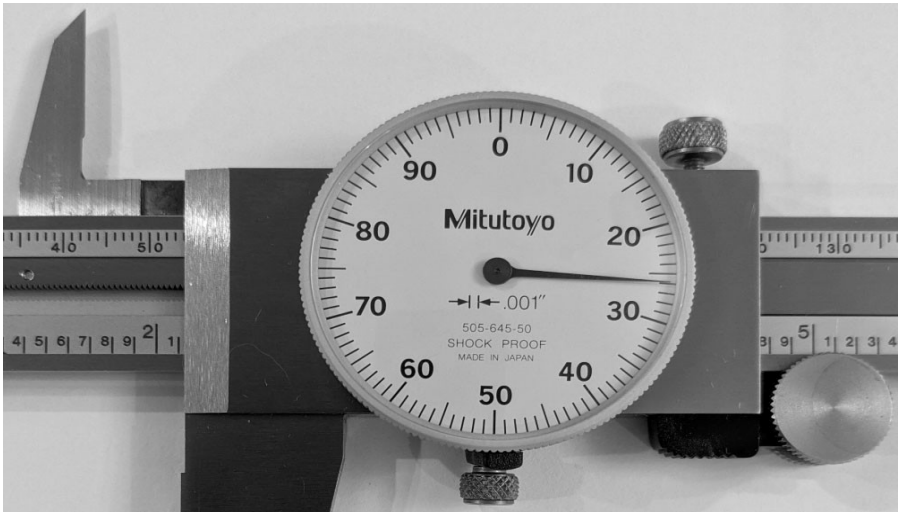
A .567
B .553
C .153
D .145

30
Read to the nearest thousandth of an inch.



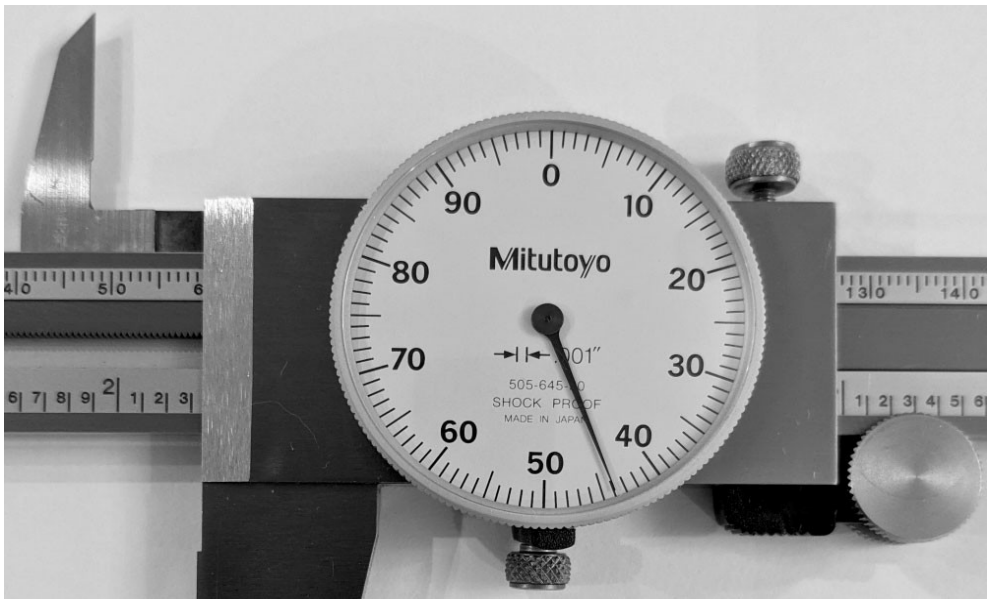
A .272
B .288
C 1.288
D 1.272

31
Read to the nearest thousandth of an inch



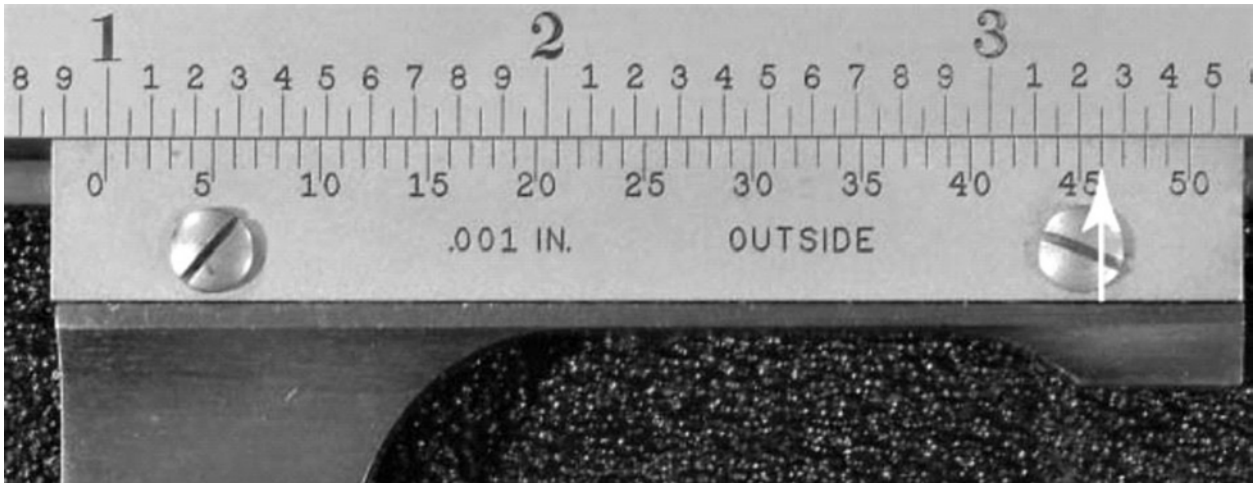
A .126
B .134
C 2.126
D 2.134

32
Read to the nearest thousandth of an inch.



A 2.356
B 2.344
C .356
D .344

33
Read the .050 vernier caliper to the nearest one thousandth at the indicated measurement.



A 3.246
B 3.250
C .996
D .946

34
The best way to calibrate or check the accuracy of a standard 1-2" micrometer would be to use a:

A Dial Caliper
B Gage Block
C Inside Micrometer
D Parallel

35
This is a federal agency responsible for conducting research and making recommendations for the prevention of work-related injuries and illnesses:

A NIMS
B NFPA
C OSHA
D NIOSH

36
All fires can be extinguished with water if a fire extinguisher is not available.

A True B False

37
What is/are **required** in order for a fire to occur? **Check all that apply.**

A Smoke
B Oxygen
C Heat
D Fuel
E Carbon Dioxide
F Metal

38
When should safety glasses be worn?

A When you enter the machining facility
B Anytime there is a potential eye hazard
C When operating a machine
D All of the above
E None of the above

39
Any liquids spilled on the floor should be wiped up immediately because:

A It will stain the floor
B It may cause someone to slip and fall
C It causes more work for the janitor
D It looks bad when visitors are touring the facility

40
Which tool would work best for measuring a 3.408" diameter shaft with a tolerance of plus or minus .001"?

A 6" Steel Rule
B 6' Vernier Caliper
C 3-4" Outside Micrometer
D 6" Dial Caliper

41
The quantity of parts to be inspected from a production run during a specified time period is stated in the company's:

A Production Plan
B Inspection Plan
C Process Plan
D Sampling Plan

42
The symbol 125√ indicates _ and is ___ in comparison to a 250√.

A the carbon percent is 25%; harder
B the surface finish of 125 microinches or better is required; smoother
C the surface finish of 125 microinches or better is required; rougher
D the carbon percent is 25%; softer