

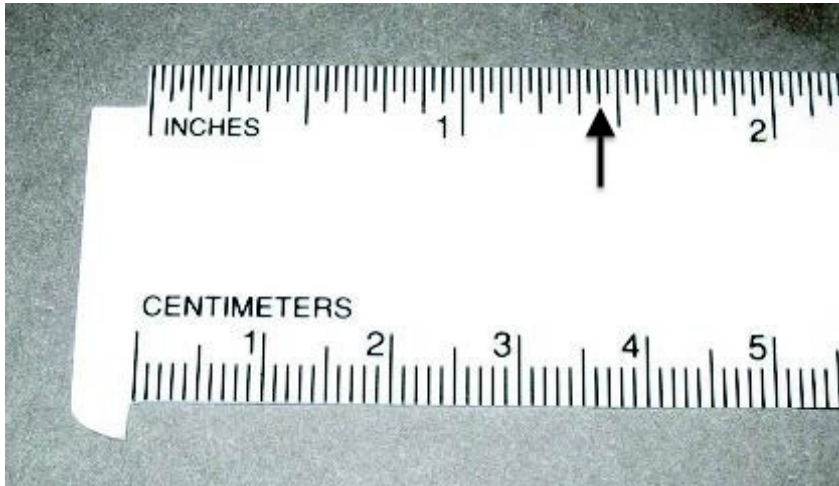
CH-12 Measuring

MULTIPLE CHOICE. Choose the one alternative that best completes the statement or answers the question.

- 1) Which tool is best to measure linear distance? 1) _____
A) Micrometer B) Machinist rule C) Dial indicator D) None of these

- 2) The best tool to measure clearance between two components is _____. 2) _____
A) Micrometer B) Feeler gauge C) Caliper D) None of these

- 3) What is the measured length on this ruler (arrow)? 3) _____



- A) 1 and 7/16 inch B) 1 and 1/2 inch C) 7/16 inch D) 3/4 inch

- 4) Which of the following *cannot* be measured using a feeler gauge? 4) _____
A) Piston ring gap B) Connecting rod side clearance
C) Valve guide clearance D) Piston ring side clearance

- 5) Which tool is used to measure valve lift? 5) _____
A) Caliper B) Dial indicator C) Micrometer D) Any of these

- 6) To check a crankshaft journal for out-of-round, the journal should be measured in at least how many locations? 6) _____
A) Eight B) Four C) Six D) Two

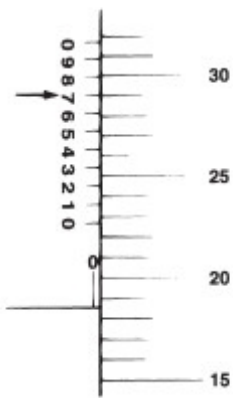
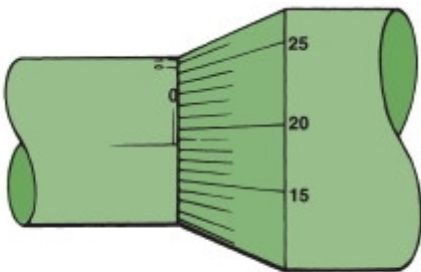
- 7) A telescopic gauge is used with what other measurement tool? 7) _____
A) Micrometer B) Straightedge C) Feeler gauge D) None of these

- 8) A telescopic gauge can be used to measure _____. 8) _____
A) Camshaft bearing out of round B) Cylinder bore taper
C) Housing bore out of round D) Any of these

- 9) Which of these objects have a mass of approximately one gram? 9) _____
A) Bird's feather B) Small paper clip
C) Large bolt D) None of these

- 10) To read a dial caliper, _____ the reading on the dial to the reading on the blade. 10) _____
A) Subtract B) Add C) Multiply D) None of these

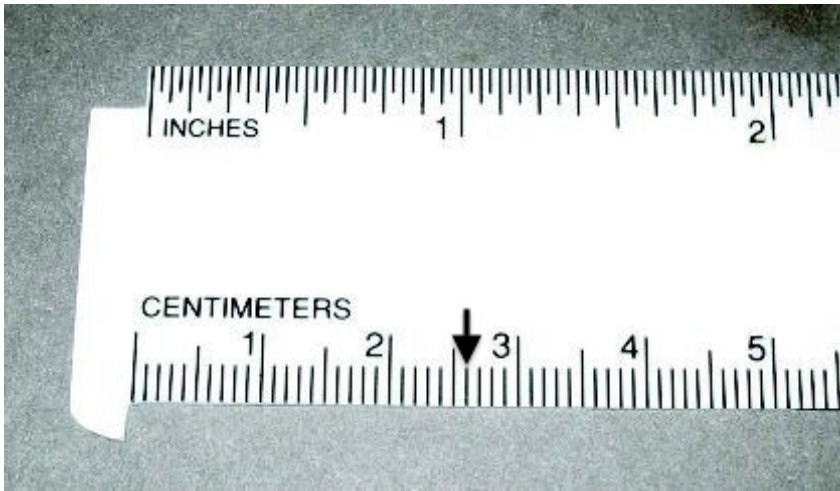
- 11) Which tool is necessary to measure flatness of engine components? 11) _____
 A) Feeler gauge B) Straight edge C) Both A and B D) Neither A nor B
- 12) There are _____ millimeters in one centimeter 12) _____
 A) 100 B) 0.10 C) 1000 D) 10
- 13) A micrometer can be used to measure to an accuracy of _____. 13) _____
 A) 0.0001 in B) 0.01 in C) 0.001 in D) None of these
- 14) On pushrod engines, camshaft journal diameter often _____ toward the rear of the engine. 14) _____
 A) Increases B) Decreases
 C) Both A and B D) Neither A nor B
- 15) Cylinder taper and out of round should be measured _____. 15) _____
 A) Near the bottom of piston travel B) Just below the ridge
 C) Both A and B D) Neither A nor B
- 16) What is the reading on this metric micrometer? 16) _____



- A) 0.250 mm B) 0.225 mm C) 0.161 mm D) 0.187 mm

17) What is the measured length on this ruler (arrow)?

17) _____



A) 34 mm

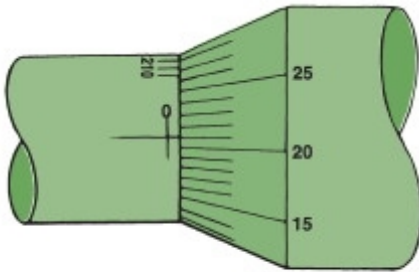
B) 3.4 cm

C) 26 mm

D) 43.6 cm

18) What is the reading on this 1 inch micrometer?

18) _____

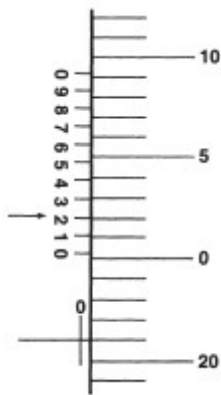


A) 0.0210 inch

B) 0.210 inch

C) 0.0260 inch

D) 0.0212 inch



19) A dial indicator may be mounted by _____.

19) _____

A) Clamp mount

B) Threaded rod

C) Magnetic mount

D) Any of these

20) Which of these would be measured using a depth micrometer?

20) _____

A) Camshaft lift

B) Oil pump rotor

C) Engine stroke

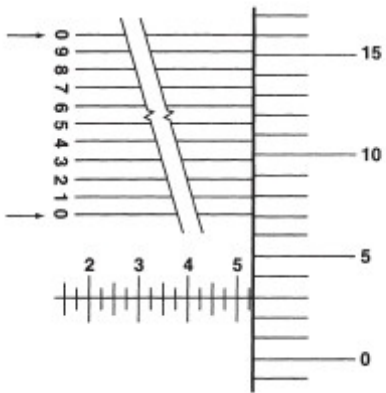
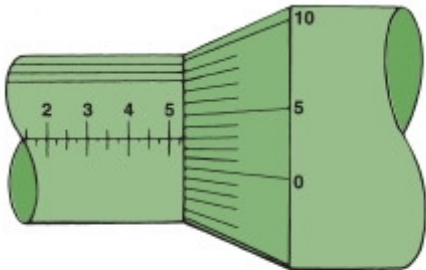
D) Valve guide diameter

21) Which of the following *cannot* be measured using a straightedge and a feeler gauge? 21) _____
 A) Cylinder head flatness B) Straightness of the cylinder bore
 C) Block deck flatness D) Straightness of the main bearing bores

22) For measuring a journal for out-of-round, measurements should be taken every _____ degrees around the journal 22) _____
 A) 90 B) 180 C) 120 D) 260

23) A telescopic gauge can be used to measure a cylinder bore if what other measuring device is used to measure the telescopic gauge? 23) _____
 A) Feeler gauge B) Micrometer C) Dial indicator D) Straightedge

24) What is the reading on this one inch micrometer? 24) _____

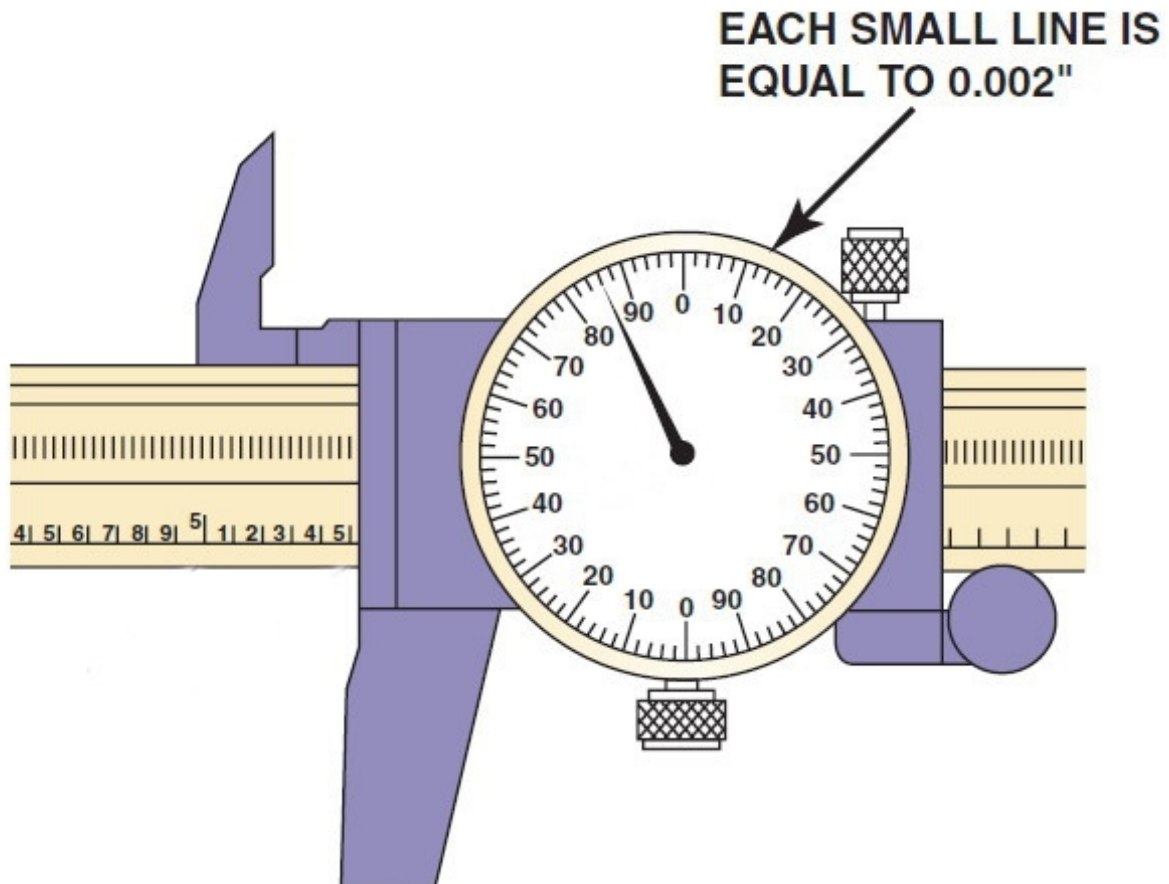


A) 0.5253 inch B) 0.5100 inch C) 0.5300 inch D) 0.5280 inch

25) Which measuring gauge needs to be set up (adjusted) to a fixed dimension before use? 25) _____
 A) Dial bore gauge B) Vernier dial gauge
 C) Micrometer D) Dial indicator

26) What is the reading on this dial caliper?

26) _____



- A) 5.500 in. B) 5.586 in. C) 9.5836 in. D) 5.594 in.

27) A feeler gauge is also called a _____.

27) _____

- A) Dial gauge B) Flat gauge
C) Straight gauge D) Thickness gauge

28) The threaded movable part that rotates on a micrometer is called the _____.

28) _____

- A) Thimble B) Anvil C) Spindle D) Sleeve

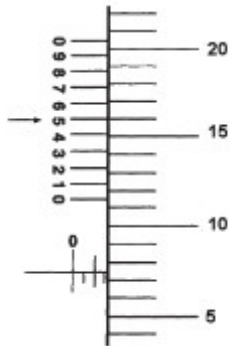
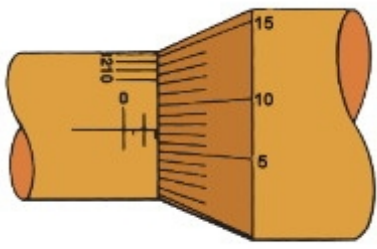
29) To check a crankshaft journal for taper, the journal should be measured in at least how many locations?

29) _____

- A) Two B) Six C) One D) Four

30) What is the reading on this one-to-two inch micrometer?

30) _____



A) 2.0825 inches

B) 0.0557 inches

C) 1.0825 inches

D) 0.77 inches