

***Machining and CNC Technology 4th edition  
Fitzpatrick Test Bank***

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***Machining and CNC Technology, 4e (Fitzpatrick)***  
**Chapter 2 Math Skills**

- 1) How is 3/4 inch expressed in decimal form?
- A) 3.400 in.
  - B) .7500 in.
  - C) .1900 in.
  - D) 34 in.

Answer: B

Explanation: To convert fractions into decimals, divide the numerator by the denominator.

Section: 02.01.03

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- 2) 1/8 in. converted to decimal form equals:
- A) eighteen and five thousandths
  - B) one hundred twenty five
  - C) one hundred twenty five thousandths
  - D) eighteen hundredths

Answer: C

Explanation: 1 divided by 8 is .125. In 'machinist speak' that's one hundred twenty five thousandths of an inch.

Section: 02.01.01

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- 3) You should multiply inches by which of the following to obtain millimeters?
- A) .01
  - B) .03937
  - C) 10
  - D) 25.4

Answer: D

Explanation: Multiply inches by 25.4 to covert to millimeters.

Section: 02.01.04

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4) To a machinist, a "tenth" is equal to:

- A) 1/10 of an inch
- B) a number rounded 10 places
- C) 10/1000 of an inch
- D) 1/10,000 of an inch

Answer: D

Explanation: The base term for machinists is thousandths, so a 'tenth' is a tenth of a thousandths.

Section: 02.01.02

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5) A machinist would refer to the dimension .21 as \_\_\_\_\_ of an inch.

- A) twenty-one hundredths
- B) two hundred and ten thousandths
- C) twenty-one thousandths
- D) twenty-one thousand

Answer: B

Explanation: A mathematician would say this is "twenty-one hundredths"; a machinist would say "two hundred and ten thousandths of an inch."

Section: 02.01.01

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6) When rounding, you should follow the following rules except:

- A) always round to the nearest whole number
- B) don't round until the final result
- C) use the memory key on your calculator
- D) round to the nearest 0.0001 inch

Answer: A

Explanation: Machinists rarely use whole numbers. The other three points are good advice!

Section: 02.01.03

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7) 30.0 mm is how many inches?

- A) 25.4 in.
- B) 762 in.
- C) .03937 in.
- D) 1.1811 in.

Answer: D

Explanation: Multiply millimeters by .03937 to obtain inches.

Section: 02.01.04

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8) On a drawing, the term  $R \frac{3}{8} \pm 0.010$  refers to which of the following?

- A) a radius that is  $\frac{3}{8}$  plus .010 inches
- B) radius  $\frac{3}{8}$ th inch plus or minus 10 thousandths of an inch
- C) a feature that is  $\frac{3}{8}$  of an inch round give or take .010%
- D) adjust the  $\frac{3}{8}$ th radius by .01 inches

Answer: B

Explanation: The radius can be 10 thousandths of an inch bigger, 10 thousandths smaller, or anywhere in-between and still be acceptable.

Section: 02.02.01

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9) A machinist would round 1.26258 to the nearest *tenth* (.0001) of an inch as which of the following?

- A) 1.362
- B) 1.253
- C) 1.2626
- D) 1.2625

Answer: C

Explanation: Rounded to the nearest *tenth* of a thousandths (remember machinist speak), you would round the 5 up to 6 because the digit to the right is 5 or greater, in this case: 8

Section: 02.01.03

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10) A circle's circumference is just over \_\_\_\_\_ times larger than its diameter.

- A) two
- B) four and a half
- C) three
- D) one and a half

Answer: C

Explanation: Circumference is the diameter times pi (3.1416)

Section: Chapter 2 review.

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