

*Practice exercises and programming activities*

The pages that follow contain the exercises you have been asked to do after each lesson. If you are using this text in conjunction with a technical school class, you may be asked by your instructor to tear out and turn in some of these exercises for grading.

## Machine configurations

1

Name: \_\_\_\_\_

Date: \_\_\_\_\_

Score (100 possible): \_\_\_\_\_

**10 points each**

1) The single-most important topic a machining center programmer must understand is the basic machining practice of machining center operations.

- true
- false

2) The orientation of the spindle determines whether the machining center is a *vertical* or *horizontal* machining center.

- true
- false

3) When it comes to programming, unless the vertical machining center has a rotary device, horizontal machining center programs tend to be shorter than vertical machining center programs.

- true
- false

4) Name and describe the three linear directions of motion (linear axes) for a vertical machining center.

\_\_\_\_\_

\_\_\_\_\_

\_\_\_\_\_

\_\_\_\_\_

5) Name and describe the directions of motion (axes) for a horizontal machining center. Include the most common rotary axis.

\_\_\_\_\_

\_\_\_\_\_

\_\_\_\_\_

\_\_\_\_\_

\_\_\_\_\_

6) From a programmer's viewpoint, describe the *plus* direction for each linear axis of a vertical machining center.

\_\_\_\_\_

\_\_\_\_\_

\_\_\_\_\_

\_\_\_\_\_

\_\_\_\_\_

7) Name two ways that you can control of the spindle of a machining center (of three possible ways).

\_\_\_\_\_

\_\_\_\_\_

8) How is feedrate designated on most machining centers?

- a. in feed per revolution
- b. in rpm
- c. in surface feet per minute
- d. in feed per minute

9) What is the letter address used to specify spindle speed?

- a. M word
- b. F. word
- c. S word
- d. R word

10) What is the letter address used to specify feedrate?

- a. M word
- b. F. word
- c. S word
- d. R word