

# 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 turning center programmer must understand is the basic machining practice of turning center operations.

true

false

2) The most popular style of turning center is the universal-style slant bed turning center.

true

false

3) When it comes to motion directions (axes), turning centers have radically different names and directions from one turning center style to another.

true

false

4) Name three of the turning center types described in lesson one.

\_\_\_\_\_

\_\_\_\_\_

\_\_\_\_\_

5) Name and describe the two most common directions of motion (axes) for a universal slant bed turning center.

\_\_\_\_\_

\_\_\_\_\_

\_\_\_\_\_

6) Explain which way is plus for the two most basic axes found on turning centers.

\_\_\_\_\_

\_\_\_\_\_

\_\_\_\_\_

7) Name the letter address used for turret indexing and explain its format.

\_\_\_\_\_

\_\_\_\_\_

\_\_\_\_\_

8) Name and describe the three M codes used for spindle activation.

\_\_\_\_\_

\_\_\_\_\_

\_\_\_\_\_

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

**Extension questions (optional)**

11) From a basic machining practice viewpoint, describe what is seriously wrong with the following process.

- Operation 1: Rough face and turn
- Operation 2: Finish face and turn
- Operation 3: Drill two inch diameter hole through workpiece
- Operation 4: Rough bore
- Operation 5: Finish bore
- Operation 6: Finish face and turn

\_\_\_\_\_

\_\_\_\_\_

\_\_\_\_\_

\_\_\_\_\_

12) Name other programmable functions of your company or school's CNC turning center.

---

---

---

---

---