

Mantuach Printing is a highly automated printing company. Mantuach allocates factory overhead based on machine hours. During a recent month, 310 machine hours were worked. These machine hours resulted in the production of 30,000 books. The production standards have an objective of 100 books per machine hour.

Facts about budgeted and actual factory overhead is as follows:

Actual total variable factory overhead for the month was \$250,000.

Variable factory overhead was estimated and applied at \$800 per machine hour.

Actual total fixed factory overhead for the month was \$120,000.

Fixed factory overhead was estimated and applied at \$450 per machine hour.

Mantuach based the fixed overhead allocation rates on an assumed production level of 28,000 books.

- (a) Calculate the overhead variances.
- (b) Prepare journal entries to apply factory overhead to production and record the related variances.