

Algebra

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

Problem Solving Using Linear Models

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

Travis' telephone company charged him \$18.45 for 50 minutes of calls in September. In October, his bill was \$26.55 for 212 minutes of calls.

1. Write an equation relating the monthly bill,  $B$ , and the number of minutes of calls,  $M$ .

2. If Travis made 175 minutes of calls in November, what would his monthly bill be?

3. Emily's December telephone bill was \$30.20. If she uses the same telephone company that Travis uses, how many minutes of calls did Emily make?

Marvin works for a painting company. He gets a base pay of \$850 and \$12.50 per hour that he paints.

1. Write a linear model that gives Marvin's monthly pay,  $P$ , in terms of the number of hours he paints,  $H$ .
2. If Marvin painted for 124 hours this month, what will his monthly pay be?
3. Marvin's pay last month was \$2600. How many hours of painting did he do?