Mathematics

1 There are six different pies left over after a party. Each of the pies has a fractional amount left at the end of the party. The line plot shows the fractions of pies leftover.
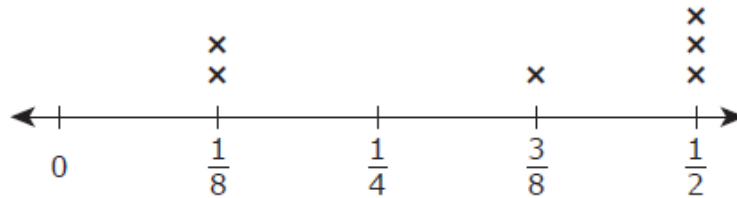
Each person who attended the party will receive an equal amount of the leftover pie.

Which piece of information is needed to determine how much pie each person should receive?

A the types of pie that are left over

B the type of pie each person likes most

C the number of slices in each whole pie

D the number of people who attended the party

2 A teacher with 25 students needs to prepare 40 one-page worksheets for each student. Each package of paper has 500 pages. The teacher thinks that 2 packages of paper are needed.

Which **two** steps are part of a solution path to show why the teacher's thinking is correct?

Select the **two** correct answers.

A Add 40 to 25 to determine the total number of worksheets the teacher needs.

B Divide 40 by 25 to determine the total number of worksheets the teacher needs.

C Multiply 40 by 25 to determine the total number of worksheets the teacher needs.

D Add the total number of worksheets to 500 to determine the number of packages the teacher needs.

E Divide the total number of worksheets by 500 to determine the number of packages the teacher needs.

F Multiply the total number of worksheets by 500 to determine the number of packages the teacher needs.

Mathematics

**3** An athlete needs to exercise $3\frac{5}{10}$ hours each week.

- The athlete exercised $\frac{6}{10}$ hour on Sunday.

- The athlete exercised $\frac{3}{10}$ hour on Monday.

- The athlete exercised $\frac{4}{10}$ hour each on Tuesday, Wednesday, and Thursday.

Create a solution path to find the time that the athlete needs to exercise the rest of the week.

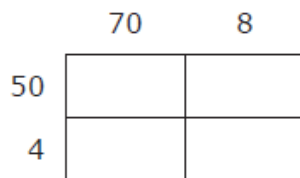Enter your answer and your work or explanation in the space provided.

4 The figure represents a rectangular floor. A custodian is installing tiles on the floor. Each tile covers 2 square feet of area.

74 feet

42 feet
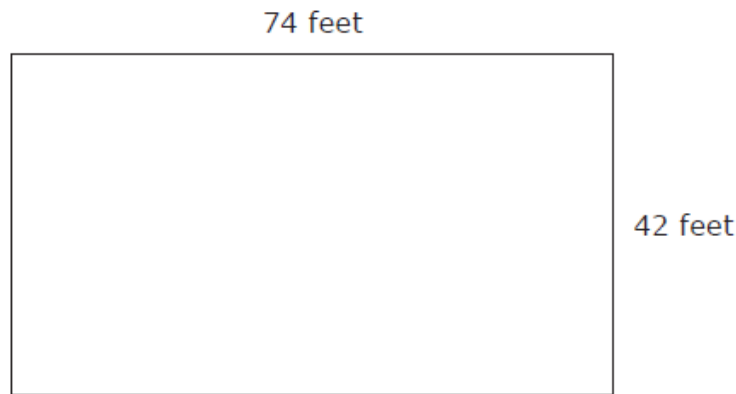
Which steps should the custodian take to find the number of tiles needed?

A First, the custodian should add the four side lengths. Next, the custodian should divide the result by 2.

B First, the custodian should add the four side lengths. Next, the custodian should multiply the result by 2.

C First, the custodian should multiply the length by the width. Next, the custodian should divide the result by 2.

D First, the custodian should multiply the length by the width. Next, the custodian should multiply the result by 2.

5 A model is shown.

70   8

50

4

Explain how the model could be used to find the result of 54 × 78. Then find the result of 54 × 78.

Enter your answer and your explanation in the space provided.

Mathematics

6 A student added $\frac{3}{10}$ and $\frac{2}{100}$ and got a result of $\frac{5}{100}$. The student's work is shown.

Step 1 (replace $\frac{3}{10}$ with an equivalent fraction): $\frac{3}{10} + \frac{2}{100} = \frac{3}{100} + \frac{2}{100}$

Step 2 (combine fractions): $\frac{3}{100} + \frac{2}{100} = \frac{3+2}{100}$

Step 3 (add numerators) : $\frac{3+2}{100} = \frac{5}{100}$

Which statement is true about the student's work and answer?

A The work and answer are correct.

B The answer is incorrect. The student made a mistake in step 1 because $10 + 100 = 110$.

C The answer is incorrect. The student made a mistake in step 1 because $\frac{3}{10}$ is not equal to $\frac{3}{100}$.

D The answer is incorrect. The student made a mistake in step 2 because $100 + 100 = 200$.

Answers

Section 4

Item Number	Answer Key
1.	D
2.	C, E
3.	**Sample Top Score Response** The total time exercised from Sunday to Thursday needs to be subtracted from $3\frac{5}{10}$. $3\frac{5}{10} - \frac{6}{10} = 2\frac{9}{10}$ $2\frac{9}{10} - \frac{3}{10} = 2\frac{6}{10}$ $2\frac{6}{10} - 3 \times \frac{4}{10} = \frac{26}{10} - \frac{12}{10} = \frac{14}{10}$ The athlete needs to exercise $1\frac{4}{10}$ more hours this week. **Refer to the Holistic Rubric for 3-Point Modeling Constructed Response Items for score point information.**
4.	C

Answers

Item Number	Answer Key
5.	**Sample Top Score Response** The model could be used to find the partial products. 70 and 8 are each multiplied by 50 and 4. 3500 is the product of 50 and 70. 400 is the product of 50 and 8. 280 is the product of 70 and 4. And 32 is the product of 8 and 4. Lastly, the partial products should be added together to get the product of 4212. **Refer to the Holistic Rubric for 3-Point Reasoning Constructed Response Items for score point information.**
6.	C