**Extra Practice 1**

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**Lesson 1: Patterns in Multiplication**

1. Multiply. Use mental math.

   a) $2 \times 17 \times 5$
   b) $31 \times 5 \times 2$
   c) $2 \times 147 \times 5$
   d) $2 \times 43 \times 50$
   e) $3 \times 18 \times 10$
   f) $4 \times 50 \times 5$

2. Multiply $10 \times 35$. Use this multiplication fact to find the missing factors.

   a) $\square \times 35 = 385$
   b) $\square \times 35 = 315$

   c) $420 = \square \times 35$
   d) $280 = \square \times 35$

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**Lesson 2: Exploring Patterns in Decimals with a Calculator**

1. a) Change each fraction to a decimal.

   $\dfrac{1}{12}, \dfrac{2}{12}, \dfrac{3}{12}, \dfrac{4}{12}, \dfrac{5}{12}, \dfrac{6}{12}, \dfrac{7}{12}$

   b) Describe any patterns.
   c) Write five other fractions with denominator 12. Change these fractions to decimals.

2. a) Copy and complete each table for numerators to 10.

| Fraction | Decimal |
|----------|---------|
| $\dfrac{1}{5}$ | |
| $\dfrac{2}{5}$ | |
| $\dfrac{3}{5}$ | |
| | |
| | |
| | |
| | |
| | |
| | |
| | |

| Fraction | Decimal |
|----------|---------|
| $\dfrac{1}{10}$ | |
| $\dfrac{2}{10}$ | |
| $\dfrac{3}{10}$ | |
| | |
| | |
| | |
| | |
| | |
| | |
| | |

   b) Describe the pattern in each table.
   c) How are the patterns in the tables the same?
      How are they different?

# Extra Practice 2

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**Lesson 3: Graphing Patterns**

1.  Wayne is paid $7 an hour to mow lawns.
    The table shows his earnings.

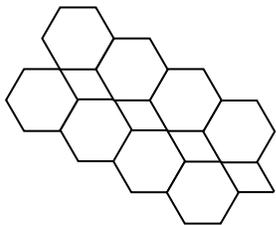    | Hours | Amount Earned ($) |
    |-------|-------------------|
    | 2     | 14                |
    | 4     | 28                |
    | 6     | 42                |
    | 8     | 56                |

    a) Write a pattern rule for the amount earned.
    b) Draw a line graph to display the data.
    c) Suppose Wayne works 7 h.
       Use the graph to find how much he will earn.

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# Extra Practice 2

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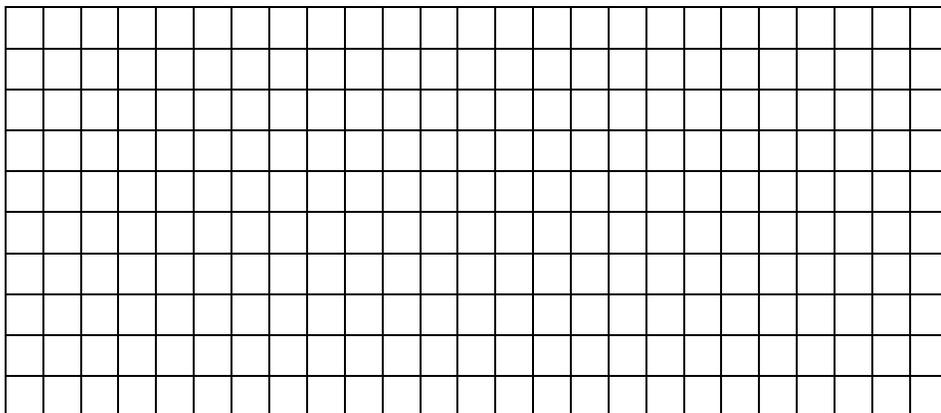**Lesson 4: Another Number Pattern**

1.  a) Find the 15th Fibonacci number.
    b) What is the sum of the first 15 Fibonacci numbers?

2.  Suppose you followed the Fibonacci pattern, but started at 6.
    6, 6, 12, …
    Show the first 10 numbers in this pattern.

**Extra Practice 3**

**Lesson 6: Tiling Patterns**

1. For the pattern below, describe:
   - the figures used in the pattern
   - the part of the pattern that repeats
   - how you could extend the pattern



2. a) On this grid, create a tiling pattern using 2 or more different figures.



   b) Describe your pattern.