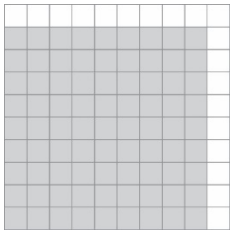
Name_____ Date_____

Number
Unit 1 Line Master 5c

Investigating Perfect Square Fractions
Answers

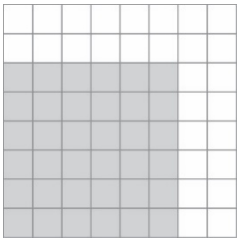
1. a) 

   b) 9 units

   c) $\frac{9}{10}$ units

   d) 9 is the square root of 81 and 10 is the square root of 100.

   e) Yes, because it can be represented by a square with side length $\frac{9}{10}$ units.
   Also, I can see that it is a perfect square in the grid.

2. a) 

   b) 6 units

   c) $\frac{6}{8}$ units

   d) 6 is the square root of 36 and 8 is the square root of 64.

   e) Yes, because it can be represented with a square with side length $\frac{6}{8}$ units.

3. a) $\frac{25}{49}$ is a perfect square because it can be represented with a square of side length $\frac{5}{7}$ units. The square root is $\frac{5}{7}$: $\frac{5}{7} \times \frac{5}{7} = \frac{25}{49}$

   b) $\frac{16}{36}$ is a perfect square because it can be represented with a square of side length $\frac{4}{6}$ units. The square root is $\frac{4}{6}$, or $\frac{2}{3}$: $\frac{4}{6} \times \frac{4}{6} = \frac{16}{36}$

   c) $\frac{64}{75}$ is not a perfect square. I cannot represent 75 with a square.

   d) $\frac{14}{25}$ is not a perfect square. I cannot represent 14 with a square.

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Name_____ Date_____

Number
Unit 1 Line Master 5d

Investigating Perfect Square Fractions
Answers (cont'd)

4. a) $\frac{49}{16}$ is a perfect square, because the numerator, 49, and the denominator, 16, are both perfect squares; the square root is $\frac{7}{4}$ or $1\frac{3}{4}$.
   $\frac{7}{4} \times \frac{7}{4} = \frac{49}{16}$
   b) $\frac{75}{16}$ is not a perfect square, because the numerator, 75, is not a perfect square.
   c) $5\frac{4}{9} = \frac{49}{9}$ is a perfect square, because the numerator, 49, and the denominator, 9, are both perfect squares; the square root is $\frac{7}{3}$ or $2\frac{1}{3}$.
   $\frac{7}{3} \times \frac{7}{3} = \frac{49}{9}$
   d) $3\frac{13}{36} = \frac{121}{36}$ is a perfect square, because the numerator, 121, and the denominator, 36, are both perfect squares; the square root is $\frac{11}{6}$ or $1\frac{5}{6}$.
   $\frac{11}{6} \times \frac{11}{6} = \frac{121}{36}$

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