Investigating Perfect Square Fractions
 Answers

**Number**

**Unit 2 Line Master 1c**

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 $\frac{5}{7}$: $\frac{5}{7}×\frac{5}{7}=\frac{25}{49}$

 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 $\frac{2}{3}$: $\frac{4}{6}×\frac{4}{6}=\frac{16}{36}$

 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.

 **Investigating Perfect Square Fractions**

**Number**

**Unit 2 Line Master 1d**

 **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 $1\frac{3}{4}$.
 $\frac{7}{4}×\frac{7}{4}=\frac{49}{16}$

 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 $2\frac{1}{3}$.
 $\frac{7}{3}×\frac{7}{3}=\frac{49}{9}$

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 $1\frac{5}{6}$.
 $\frac{11}{6}×\frac{11}{6}=\frac{121}{36}$