Rational or Irrational? Answer Key

1.
$$\frac{6}{8}$$
, 592, $-\frac{4}{5}$

- 2. various answers
- 3. Be sure students convey that rational numbers are numbers that can be written as a fraction or ratio of *integers*.

4.
$$\sqrt{\frac{2}{5}}, \sqrt{1.6}, 3\pi$$

- 5. various answers
- 6. Be sure students convey that irrational numbers are numbers that cannot be written as a fraction or ratio of integers.
- 7. The correct answer is C.
 - a. If the length was 12 and the width was 6:

$$\begin{array}{l} A = LW \\ A = 12(6) \\ P = 2(12) + 2(6) \\ P = 24 + 12 \end{array}$$

P = 36, a rational number because it can be written as $\frac{36}{36}$.

b. If the length was $\sqrt{9}$ and the width was $\sqrt{2}$:

$$A = LW$$
$$A = \sqrt{9} \left(\sqrt{2}\right)$$
$$P = 2 \left(\sqrt{9}\right) + 2 \left(\sqrt{2}\right)$$

 $P = 2(\sqrt{9}) + 2(\sqrt{2})$ There is no way to write this number as a ratio or fraction of two integers. It is an irrational number.

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