Name: _____ Date: _____

BLM 3–4

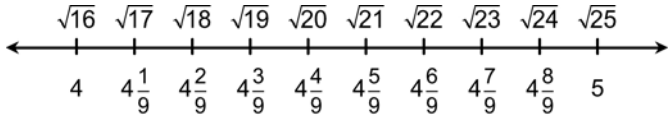
Chapter 3 Problems of the Week

1. Will, Jill, and Phil each have three pieces of wood. The chart below shows the length of each piece of wood.

Wood Lengths (cm)			
Name	**Piece 1**	**Piece 2**	**Piece 3**
Will	12	9	10
Jill	13	5	12
Phil	5	3	4

Each of them wishes to construct a right triangle. The wood cannot be bent, broken, cut, or overlapped. The pieces of wood must be placed so that only the ends are touching. Which of them can make a right triangle?

2. You can use a double number line to find the approximate square root of any number.



a) Use your calculator to find the decimal value of each mixed number. Next, use your calculator to find the value of the square root above it on the number line. Copy and fill in the table. What did you discover?

Decimal Value of Mixed Number	Value of Square Root
$4\frac{1}{9} =$ ☐	$\sqrt{17} =$ ☐
$4\frac{2}{9} =$ ☐	$\sqrt{18} =$ ☐
$4\frac{3}{9} =$ ☐	$\sqrt{19} =$ ☐
$4\frac{4}{9} =$ ☐	$\sqrt{20} =$ ☐
$4\frac{5}{9} =$ ☐	$\sqrt{21} =$ ☐
$4\frac{6}{9} =$ ☐	$\sqrt{22} =$ ☐
$4\frac{7}{9} =$ ☐	$\sqrt{23} =$ ☐
$4\frac{8}{9} =$ ☐	$\sqrt{24} =$ ☐

b) Express the approximate value of $\sqrt{32}$ as a mixed number. Use your calculator to express the mixed number as a decimal number. Then, use your calculator to check the value of $\sqrt{32}$. Try other numbers.

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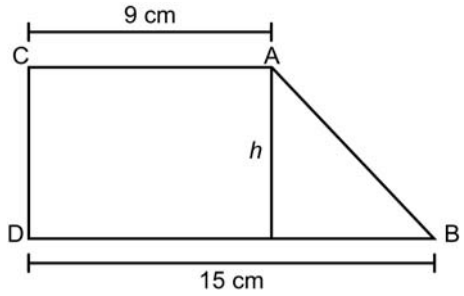
(continued)

3. If the height, h, of figure ABCD is 8 cm, what is the length of AB?



4. Suki walked 12 m due west and 5 m due north. What is the shortest distance in metres from where Suki started to where she is now?

5. Challenge yourself to memorize the perfect square numbers from 1 to 225. Can you repeat them from lowest to highest and then back down to lowest in one minute or less?

6. Alice is sewing a rectangular flag. She will sew two equal-sized triangular pieces of material together. The flag measures 4 m × 6 m. How long will the seam be between the two triangular pieces of material? Express your answer to the nearest hundredth of a metre.