

1. What is an inverse variation? Include an example.
2. Describe how a direct variation is different from an inverse variation.
3. Describe what the constant of variation means in a direct variation and an inverse variation.
4. Write five ordered pairs that are from the same inverse variation.
5. The area formula for a parallelogram with area 36 is  $bh = 36$ . Does the formula represent a direct or an inverse variation? Explain.

In an inverse variation, the product of two quantities remains constant. For example,  $xy = 40$  is an  
[1] inverse variation.

In a direct variation,  $y$  increases as  $x$  increases. In an inverse variation, the product of  $x$  and  $y$  is constant,  
[2] so as  $y$  increases  $x$  decreases.

Answers may vary. Sample: In a direct variation, values of independent variables are multiplied by the  
constant of variation to find the values of the dependent variable. In an inverse variation the product of  
[3] the two variables equals the constant of variation.

[4] Answers may vary. Sample: (1, 16), (2, 8), (4, 4), (8, 2), (16, 1)

[5] It represents an inverse variation because the product of  $b$  and  $h$  is constant.