**Lesson 3 Reteach**

***Slope and Similar Triangles***

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| Recall that the slope of a line is the ratio of the rise to the run. You can use properties of similar triangles to show the ratios of the rise to the run for each right triangle are equal. |

**Example**

**Write a proportion comparing the rise to the run for**



**each of the similar slope triangles shown at the right.**

**Then determine the numeric value.**

 $\frac{CB}{ED}$ = $\frac{BA}{DC}$ Corresponding sides of similar

 triangles are proportional.

*CB* • *DC* = *ED* • *BA* Find the cross products.

$\frac{CB •DC}{BA • DC}$ = $\frac{ED • BA}{BA • DC}$ Division Property of Equality

 $\frac{CB}{BA}$ = $\frac{ED}{DC}$ Simplify.

 $\frac{1}{2}$ = $\frac{3}{6}$ *CB* = 1, *BA* = 2, *ED* = 3, *DC* = 6

So, $\frac{CB}{BA}$ = $\frac{ED}{DC}$, or $\frac{1}{2}$ = $\frac{3}{6}$.

**Exercises**

 **1.** Graph ∆*XYZ* with vertices *X*(–3, 5), **2.** Graph ∆*ABE* with vertices *A*(-4, -3),

 *Y*(–3, 3), and *Z*(0, 3) and ∆*ZLP* with *B*(0, 0), and *E*(0, -3) and ∆*ACD* with

 vertices *Z*(0, 3), *L*(0, –1), and *P*(6, –1). vertices *A*(–4, –3), *C*(4, 3), and *D*(4, –3).

 Then write a proportion comparing the Then write a proportion comparing the

 rise to the run for each of the similar rise to the run for each of the similar

 slope triangles and determine the numeric slope triangles and determine the numeric

 value. value.



