### Lesson 15 Practice Problems

1. Of the three lines in the graph, one has slope 1, one has slope 2, and one has slope $\frac{1}{5}.$ Label each line with its slope.
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1. Draw three lines with slope 2, and three lines with slope $\frac{1}{3}$. What do you notice?
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1. The figure shows two right triangles, each with its longest side on the same line.
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	1. Explain how you know the two triangles are similar.
	2. How long is $XY$?
	3. For each triangle, calculate (vertical side) $÷$ (horizontal side).
	4. What is the slope of the line? Explain how you know.
1. Triangle $A$ has side lengths 3, 4, and 5. Triangle $B$ has side lengths 6, 7, and 8.
	1. Explain how you know that Triangle $B$ is *not* similar to Triangle $A$.
	2. Give possible side lengths for Triangle $B$ so that it is similar to Triangle $A$.
* (From Unit 2, Lesson 14.)
1. Select **all**the ratios that are equivalent to the ratio $12:3$.
	1. $6:1$
	2. $1:4$
	3. $4:1$
	4. $24:6$
	5. $15:6$
	6. $1,​200:300$
	7. $112:13$
* (From Unit 2, Lesson 3.)
1. Triangle $ABC$ is a scaled copy of triangle $DEF$. Side $AB$ measures 12 cm and is the longest side of $ABC$. Side $DE$ measures 8 cm and is the longest side of $DEF$.
	1. Triangle $ABC$ is a scaled copy of triangle $DEF$ with what scale factor?
	2. Triangle $DEF$ is a scaled copy of triangle $ABC$ with what scale factor?
* (From Unit 2, Lesson 8.)



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