Use the diagram for the following sets of stairs. Let each square be one square unit. Write original fraction and reduced answer if necessary.

 1. Find the slope of one stair from Stair Set A. \_\_\_\_\_\_\_\_\_\_ = \_\_\_\_\_\_\_\_\_

Stair Set B

Stair Set A

2. Find the slope of the whole set of stairs for Stair Set A.\_\_\_\_\_\_\_\_\_\_ = \_\_\_\_\_\_\_\_\_

3. Find the slope of one stair from Stair Set B.\_\_\_\_\_\_\_\_\_\_ = \_\_\_\_\_\_\_\_\_

4. Find the slope of the whole set of stairs for Stair Set B.\_\_\_\_\_\_\_\_\_ = \_\_\_\_\_\_\_\_\_\_

Find the slope of the lines in the drawing. Let each square be one square unit. (Hint: Draw a right triangle and make a step.) Write original fractions and reduce your answers if necessary.



Line C

Line B

Line A

1. Line A: Slope = \_\_\_\_\_\_ = \_\_\_\_\_\_\_
2. Line B: Slope = \_\_\_\_\_\_ = \_\_\_\_\_\_\_
3. Line C: Slope = \_\_\_\_\_\_ = \_\_\_\_\_\_\_

**Simplify the following. Show all work for full credit.**

7.  = \_\_\_\_\_\_\_\_ 8. =\_\_\_\_\_\_\_

9. **Express the following fractions as decimals and then percents.**

|  |  |  |
| --- | --- | --- |
| Fraction | Decimal (round to 3 places) | Percent (round to nearest tenth) |
| $$\frac{6}{9}$$ |  |  |
| $$\frac{1}{4}$$ |  |  |
| $$\frac{7}{12}$$ |  |  |
| $$1\frac{1}{2}$$ |  |  |

10. Express  as a decimal.\_\_\_\_\_\_\_\_

11. Express 25% as a fraction (reduce your answer). \_\_\_\_\_\_\_\_\_\_\_

**Solve the following equations. Show all work:**

12.  13. 

14. Find the area of a triangle with a base of 14 cm. and a height of 7 cm.

15. Find the perimeter of a square with a side of 10 in.