**Do Now / Group work:** *justify all answers with proper notation and calculation details*

1. **Applying slope:** Plot and label : A(-2, -1), B(4, 7), C(8, -1)

2) What are the slopes of the triangle’s legs?

a) State the general formula for slope given two points (*x*1, *y*1) and (*x*2, *y*2).

b) Slope  =

c) Slope =

d) Slope  =

3) What is the equation of the line, ?

a) State the formula for a line given a slope *m* and a point (*x*1, *y*1). (i.e. *point-slope* form)

b) State the equation of the line by substituting *m* and the coordinates of point *B*.

c) Convert the equation for  to *slope-intercept* form.

4) What is the equation of a line through point C having the same slope as ?

5a) What is the slope of the line containing the points (0, 6) and (5, 8)?

5b) What is the *equation* of the line containing the same points, (0, 6) and (5, 8)?

6) What is the *equation* of the line containing the point (3, 5) with a slope of ½?

7) What is the *equation* of the line with *y*-intercept (0, 4) and slope 2?

8) What is a line parallel to *y* = (3/4)*x* + 3 with *y*-intercept (0, -2)?

9) What is the equation of a line through (1, 5) and *perpendicular* to *y* = (3/4)*x* + 3 ?

10) What is the equation of a line *perpendicular* to 2*x* + *y* = 3 through (-4, 5)?

**Homework**



2.



