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Instructions: Please complete the following problems.

Problem 1. Find the slope: $(2, 5)$ and $(3, -7)$

Problem 2. Find the equation of a line passing through $(-2, -4)$ and has a slope of 4.

Problem 3. Find the equation of a line passing through $(-3, -2)$ and $(3, 6)$.

Problem 4. Graph the following and state each of their slopes:

1. $x = -2$

2. $y = 2x + 2$

3. $y = -2$

Problem 5. Determine if the lines are parallel, perpendicular, or neither: $8x + 3y = 7$ and $7x - 5y = 0$.

Problem 6. Find the equation of a line that passes through $(3, 7)$ and is parallel to the line $6x + 3y = 36$.

Problem 7. Find the equation of a line that passes through the point $(8, 2)$ and is perpendicular to the line $2x + 3y = 18$.

Problem 8. Find the equation of a line that passes through the point $(3, 5)$ and is perpendicular to the line containing $(1, 8)$ and $(5, 20)$.