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| **For questions 1 and 2, find the slope of the line passing through each pair of points. If the slope is undefined, write “undefined”.**  |
| 1. (-8, 7) and (5, -2)
 | 1. (5, 9) and (5, -3)
 |
| 1. Find the value of r so that the line through (-4, 3) and (4, -3) has a slope of $\frac{2}{3}. $
 | 1. Find the value of *r* so that the line through (4, 5) and (6, r) has a slope of $\frac{5}{8}.$
 |
| 1. In 1990, there were approximately 35,000 people in Lancaster. Five years later, the population was 38,452. Find the rate of change in the population.
 | 1. Write $y+4= -\frac{2}{3}\left(x-9\right)$ in standard form.
 |
| 1. If an ostrich can run 15 kilometers in 15 minutes, how many kilometers can it run in an hour?
 | 1. Write the point-slope form of an equation of the line that has slope $-\frac{3}{5}$ and passes through (2, 1)
 |
| 1. Graph $y= -\frac{3}{4}x.$
 | 1. Graph a line whose x-intercept is 5 and whose slope is $-\frac{3}{5}. $
 |
| 1. Write an equation in standard form of the line that passes through (2, -3) and (-3, 7).
 | 1. Write the point-slope form of the equation for the line that has x-intercept -3 and y-intercept -2.
 |
| **For questions 13 – 20, write an equation in slope-intercept form of the line satisfying the given conditions.**  |
| 1. Has y-intercept -8 and slope 3
 | 1. Has slope $\frac{5}{2}$ and passes through (4, -1)
 |
| 1. Passes through (-3, 7) and (2, 4)
 | 1. Is horizontal and passes through (-4, 6)
 |
| 1. Is parallel to the y-axis and has an x-intercept of 3
 | 1. Is perpendicular to 4y = 3x – 8 and passes through (-12, 7)
 |
| 1. Is parallel to 3x – 5y = 7 and passes through (0, -6)
 | 1. Is perpendicular to the y-axis and passes through (-2, 5)
 |
| 1. A rental Company charges $52.99 per day, including 200 free kilometers. There is a charge of $0.12/km for additional kilometers. Write a linear equation that models this situation.
 | 1. Write the slope intercept form of y + 3 = -0.5(x – 10)
 |
| **For questions 23 - 27, use the data in the table.** |
| 1. Make a scatter plot relating the verbal scores and the math scores.

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| State Graduation Scores |
| **Year** | **Verbal Score** | **Math Score** |
| 1970 | 460 | 488 |
| 1980 | 424 | 466 |
| 1990 | 410 | 463 |
| 2000 | 420 | 460 |

 | 1. Does the scatter plot in question 21 show a *positive,* a *negative,* or *no correlation?* What does that relationship represent?
 |
| 1. Write the equation for a line of best fit.
 | 1. Use the equation in #23 to predict the corresponding math score for a verbal score of 445.
 |