Writing an equation and drawing its graph to model a real-world situation: Basic: Worksheet 11.1

Name ..... Date ..... Score .....

1. Let y be the amount of water in a pond and let x be the number of minutes water flows into it. Write an equation relating y to x and then graph the equation. Initially 600 liters of water is in the pond; the rate at which water flows into the pond is 10 liters per minute.
2. John's party costs $120 plus $8 for every guest he invites. Let y be the total cost of party and x be the number of guests. Write an equation in x and y and graph it.
3. Anita already has 4 bracelets, and new bracelets are priced $5 each. Let y be the total number of bracelets and x be the number of new bracelets. Write an equation in x and y and graph it.
4. Gracie is putting $200 in a savings account and adding $30 each week. Let y represent the total amount saved and let x represent the number of weeks Gracie has been adding money. Write an equation relating y and x and graph it.
5. Ella has walked 20 kilometers, further she plans to walk 2 kilometer during each trip to work. Let y be the total distance walked and x be the number of trips she makes. Write an equation an equation in x and y and graph it.
6. Nathan has made 10 liters of jam and will make an additional 1 liter of jam every day. If y is the number of liters of jam made and x is the number of days, write an equation relating y and x and graph it.
7. Donald has 6 stamps and buys 2 stamps during each day of vacation. Let y be the total number of stamps Donald has and x be the days of vacation. Write an equation in x and y and graph it.
8. Jesse has savings of $40 and earns $6 for each hour of lawn mowing. If y is the total amount with Jesse and x is the number of hours he works, write and equation in y and x and graph it.
9. Lyra has already written 32 pages and she writes 5 pages per hour. Let y be the total pages written and x the number of hours she writes. Write an equation in y and x and graph it.
10. Vista Car Rentals charge a base charge of $80 and $25 per hour for renting cars. Let y represent the total bill amount and x be number of hours the car is rented. Write an equation relating y and x and graph it.

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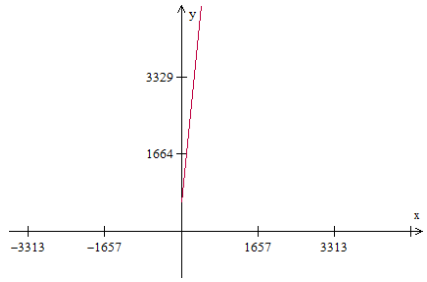
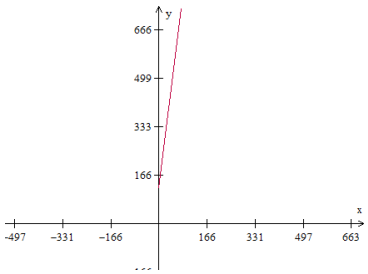
Solutions: Worksheet 11.1

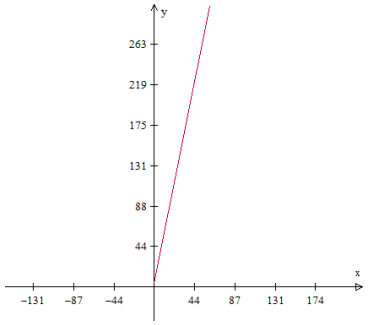
1. y = 600 + 10x



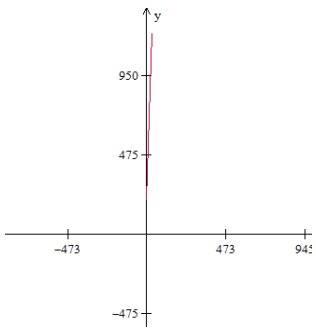
2. y =120 + 8x



3. y = 4 + 5x



4. y = 200 + 30x



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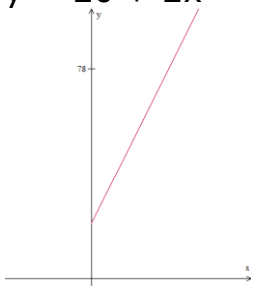
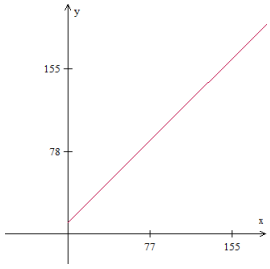
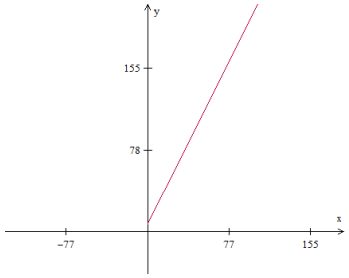
5. y = 20 + 2x



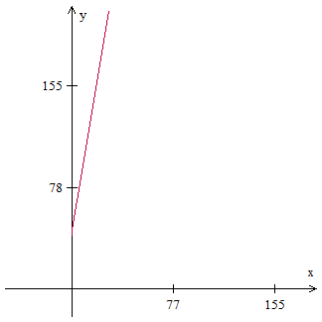
6. y = 10 + x



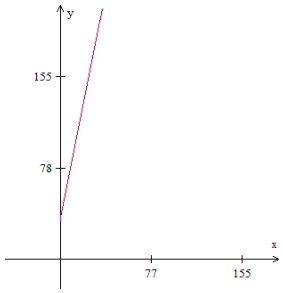
7. y = 6 + 2x



8. y = 40 + 6x



9. y = 32 + 5x



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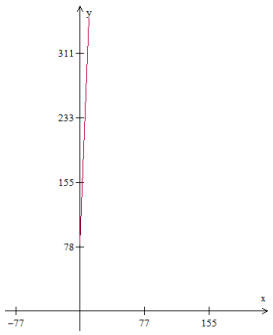
10. y = 80 + 25x



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