

Topic 3 Review

_____ 1. Which function rule matches the input-output table?

Input, x	1	2	3	4	5
Output, y	7	11	15	19	23

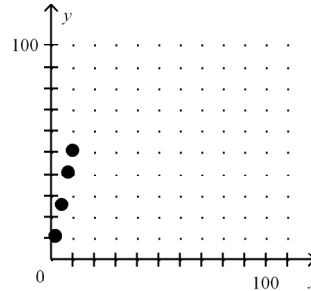
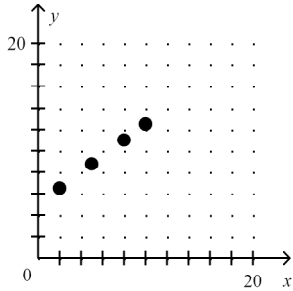
- a. $y = 3 + 5x$ b. $y = 3 + 4x$ c. $y = 4 + 3x$ d. $y = 2 + 4x$

2. A bag of chips costs \$2.33. Your total grocery bill, b , is a function of the number of bags of chips, n , you purchase. Write an equation to represent this function.
3. You are flying in a plane averaging 450 miles per hour. The distance, d , you travel is a function of the number of hours, h , you travel at that rate. Write an equation to represent this function.
4. The amount A that the Hernandez family spends in n weeks for groceries at a local food club includes \$45 for the initial registration fee and \$37 each week for a box of groceries. Write an equation that describes the relationship between A and n .
5. For a baby girl less than one year old, the function $l = 17 + \frac{5}{6}m$ represents the baby's length l in inches at the end of m months. What is the independent quantity in this relationship?
6. Which function includes the data set Anna has \$35. She spends \$4 for lunch each day. Which equation shows how many dollars s Anna still has after d days?
7. Bananas cost \$.75 per pound. Write a function that models the cost y of x pounds of bananas.

8. Employees earn \$5 per hour plus \$0.75 for every unit they produce per hour. Which of the following shows both an equation in which y represents the employee's wages for producing x units per hour, and the graph of the wages earned for producing 2, 5, 8, and 10 units per hour?

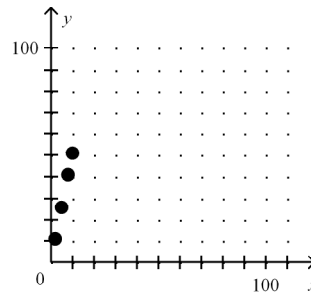
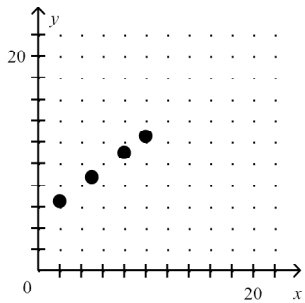
a. $y = 5 + 0.75x$

c. $y = 5x + 0.75$



b. $y = 5x + 0.75$

d. $y = 5 + 0.75x$



9. The temperature in degrees Fahrenheit F is 32 greater than $\frac{9}{5}$ of the temperature in degrees Celsius C . Write an equation to determine F .

10. The Fraser family is traveling 475 miles for a vacation. They drive 65 miles per hour. Write an equation to describes how many miles m remain after h hours of driving.

Name: _____

ID: A

11. Rod opens a savings account and puts \$225 in the account. He will put \$50 in the account each month afterwards. Assume that Rod does not withdraw any money from the account. Write an equation to describe the total amount s that Rod has deposited after exactly m months.

12. A new skyscraper is being built downtown. One story goes up the first week and 2 stories go up each week after that. Each week Todd tries to guess how many stories the building will have when completed. Write an equation to describe the number of stories s Todd might guess after n weeks of construction.

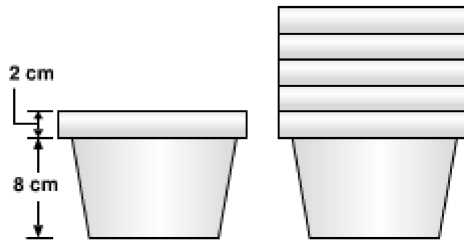
13. Lori sells flower arrangements. She has an order for two single roses and some table arrangements. If she uses 5 roses in each table arrangement, write a function rule that correctly relates x , the number of table arrangements, to r , the number of roses she needs altogether.

14. Jose gets an allowance of \$10 per week. If he does chores, his parents give him an additional \$3 per hour for every hour of work. Write a function that can be used to determine the amount of money A that Jose will receive if he works h hours this week.

15. Jose gets an allowance of \$10 per week. If he does chores, his parents give him an additional \$3 per hour for every hour of work. What is the independent variable in this function?

16. Jose gets an allowance of \$10 per week. If he does chores, his parents give him an additional \$3 per hour for every hour of work. What is the dependent variable in this function?

17. In the picture, you see one paper cup and five paper cups that are stacked together. The table shows the heights of stacks with different numbers of cups.



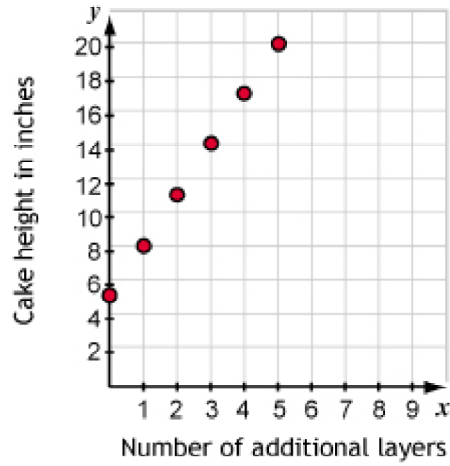
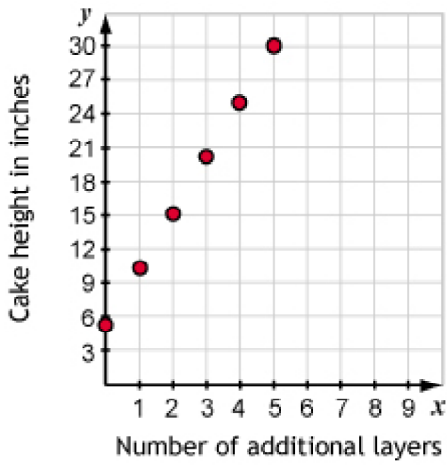
Height of Stacked Cups

Number of cups	Process	Height of stack (cm)
1	$8 + 2(1)$	10
2	$8 + 2(2)$	12
3	$8 + 2(3)$	14
4	$8 + 2(4)$	16
c		h

Write a function rule that gives the height of a stack of cups, h , in terms of the number of cups in a stack, c .

18. In the previous question about the stacked cups, the independent variable is _____ and the dependent variable is _____

19. If a wedding-cake design has a base layer that is 5 inches tall and can have up to 5 additional layers, each 3 inches tall, which graph represents possible heights of a cake with this design?



20. One wedding-cake design has a base layer that is 5 inches tall, and each additional layer is 3 inches tall. If h represents the height of the cake and t represents the number of additional layers, write a function rule that models the height of a wedding cake made in this design.



Topic 3 Review

Answer Section

- ANS: B PTS: 1 DIF: Level B REF: MALG0205
 STA: TX.TEKS.MTH.05.AL1.A.1.E | TX.TEKS.MTH.05.AL1.A.2.C | TX.TAKS.MTH.07.9.1.A.1.E | TX.TAKS.MTH.07.9.2.A.2.C | TX.TAKS.MTH.07.10.1.A.1.E | TX.TAKS.MTH.07.10.2.A.2.C | TX.TAKS.MTH.07.11.1.A.1.E | TX.TAKS.MTH.07.11.2.A.2.C
 TOP: Lesson 1.6 Represent Functions as Rules and Tables KEY: output | function | table | input
 BLM: Comprehension NOT: 978-0-618-65612-7
- ANS:
 $b = 2.33n$

PTS: 1 DIF: Level B REF: MALG0208
 NAT: NCTM 9-12.ALG.1.a | NCTM 9-12.ALG.1.b | NCTM 9-12.ALG.2.c
 STA: TX.TEKS.MTH.05.AL1.A.1.D | TX.TEKS.MTH.05.AL1.A.3.B | TX.TEKS.MTH.05.AL1.A.5.C | TX.TAKS.MTH.07.9.1.A.1.D | TX.TAKS.MTH.07.9.2.A.3.B | TX.TAKS.MTH.07.9.3.A.5.C | TX.TAKS.MTH.07.10.1.A.1.D | TX.TAKS.MTH.07.10.2.A.3.B | TX.TAKS.MTH.07.10.3.A.5.C | TX.TAKS.MTH.07.11.1.A.1.D | TX.TAKS.MTH.07.11.2.A.3.B | TX.TAKS.MTH.07.11.3.A.5.C
 TOP: Lesson 1.6 Represent Functions as Rules and Tables KEY: equation | function | graph | write
 BLM: Application NOT: 978-0-618-65612-7
- ANS:
 $d = 450h$

PTS: 1 DIF: Level B REF: MALG0209
 NAT: NCTM 9-12.ALG.1.a | NCTM 9-12.ALG.1.b | NCTM 9-12.ALG.2.c
 STA: TX.TEKS.MTH.05.AL1.A.1.D | TX.TEKS.MTH.05.AL1.A.3.B | TX.TEKS.MTH.05.AL1.A.5.C | TX.TAKS.MTH.07.9.1.A.1.D | TX.TAKS.MTH.07.9.2.A.3.B | TX.TAKS.MTH.07.9.3.A.5.C | TX.TAKS.MTH.07.10.1.A.1.D | TX.TAKS.MTH.07.10.2.A.3.B | TX.TAKS.MTH.07.10.3.A.5.C | TX.TAKS.MTH.07.11.1.A.1.D | TX.TAKS.MTH.07.11.2.A.3.B | TX.TAKS.MTH.07.11.3.A.5.C
 TOP: Lesson 1.6 Represent Functions as Rules and Tables KEY: graph | write | function
 BLM: Application NOT: 978-0-618-65612-7
- ANS:
 $A = 37n + 45$

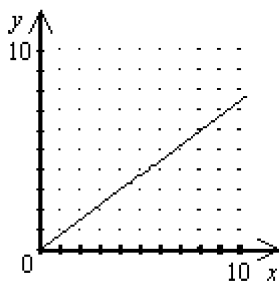
PTS: 1 REF: c8e3c2c0-2d6b-11db-b4c1-0011258082f7
 STA: TX TAKS 1 | TX AL1.A.1.C TOP: AL1.A.1.C Practice
 KEY: TAKS 1.1C NOT: 978-0-618-65612-7
- ANS:
 The number of months since birth

PTS: 1 REF: c8f491d0-2d6b-11db-b4c1-0011258082f7
 STA: TX TAKS 1 | TX AL1.A.1.A TOP: Mixed Review
 KEY: TAKS 1.1MixReview NOT: 978-0-618-65612-7

6. ANS:
 $s = 35 - 4d$

PTS: 1 REF: c8faae90-2d6b-11db-b4c1-0011258082f7
 STA: TX TAKS 1 | TX AL1.A.1.D TOP: Mixed Review
 KEY: TAKS 1.1MixReview NOT: 978-0-618-65612-7

7. ANS:
 $y = 0.75x$



PTS: 1 DIF: Level B REF: MALG0210
 NAT: NCTM 9-12.ALG.1.a | NCTM 9-12.ALG.1.b | NCTM 9-12.ALG.2.c
 STA: TX.TEKS.MTH.05.AL1.A.1.D | TX.TEKS.MTH.05.AL1.A.3.B | TX.TEKS.MTH.05.AL1.A.5.C |
 TX.TAKS.MTH.07.9.1.A.1.D | TX.TAKS.MTH.07.9.2.A.3.B | TX.TAKS.MTH.07.9.3.A.5.C |
 TX.TAKS.MTH.07.10.1.A.1.D | TX.TAKS.MTH.07.10.2.A.3.B | TX.TAKS.MTH.07.10.3.A.5.C |
 TX.TAKS.MTH.07.11.1.A.1.D | TX.TAKS.MTH.07.11.2.A.3.B | TX.TAKS.MTH.07.11.3.A.5.C
 TOP: Lesson 1.6 Represent Functions as Rules and Tables
 KEY: equation | word | linear | graph | write BLM: Application
 NOT: 978-0-618-65612-7

8. ANS: A PTS: 1 DIF: Level B REF: MALG0232
 NAT: NCTM 9-12.ALG.4.a
 STA: TX.TEKS.MTH.05.AL1.A.2.C | TX.TAKS.MTH.07.9.2.A.2.C | TX.TAKS.MTH.07.10.2.A.2.C |
 TX.TAKS.MTH.07.11.2.A.2.C TOP: Lesson 1.7 Represent Functions as Graphs
 KEY: equation | word | system | rectangular | graph | coordinate | plot
 BLM: Application NOT: 978-0-618-65612-7

9. ANS:
 $F = \frac{9}{5}C + 32$

PTS: 1 REF: c8e3e9d0-2d6b-11db-b4c1-0011258082f7
 STA: TX TAKS 1 | TX AL1.A.1.C TOP: AL1.A.1.C Practice
 KEY: TAKS 1.1C NOT: 978-0-618-65612-7

10. ANS:
 $m = 475 - 65h$

PTS: 1 REF: c8e9df80-2d6b-11db-b4c1-0011258082f7
 STA: TX TAKS 1 | TX AL1.A.1.D TOP: AL1.A.1.D Practice
 KEY: TAKS 1.1D NOT: 978-0-618-65612-7

11. ANS:
 $s = 50m + 225$
- PTS: 1 REF: c8ed14f0-2d6b-11db-b4c1-0011258082f7
 STA: TX TAKS 1 | TX AL1.A.1.D TOP: AL1.A.1.D Practice
 KEY: TAKS 1.1D NOT: 978-0-618-65612-7
12. ANS:
 $s \geq 2n + 1$
- PTS: 1 REF: c8ee7510-2d6b-11db-b4c1-0011258082f7
 STA: TX TAKS 1 | TX AL1.A.1.D TOP: AL1.A.1.D Practice
 KEY: TAKS 1.1D NOT: 978-0-618-65612-7
13. ANS:
 $2 + 5r = x$
- PTS: 1
14. ANS:
 $10 + 3h = A$
- PTS: 1
15. ANS:
 hours Jose works
- PTS: 1
16. ANS:
 the amount of money Jose earns in week
- PTS: 1
17. ANS:
 $8 + 2(x) = h$
- PTS: 1
18. ANS:
 number of cups
 height of stack
- PTS: 1
19. ANS:
 the one on the ?
- PTS: 1
20. ANS:
 $5 + 3t = h$
- PTS: 1