

You must show work for EVERY problem to receive credit.

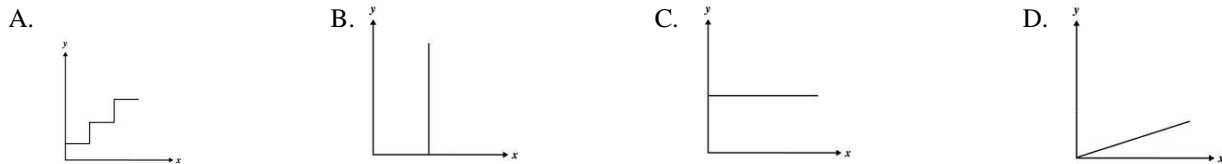
1. A child drinks $1\frac{1}{2}$ cups of milk twice a day. If a container of milk has 15 cups of milk remaining for the child to drink, in how many days will the container be empty? NO CALCULATOR. You must show your calculations to receive credit.
2. Andre makes \$8 an hour working at a store. After 6 months, he receives a 5% increase in his hourly pay. He also receives a \$2 bonus for each person who signs up on the mailing list. Andre has worked for 8 months. What is Andre's pay for one week if he works 36 hours and signs up 6 people on the mailing list that week?
3. Susan used $9\frac{5}{8}$ kilowatts of electricity to power her house for $5\frac{1}{2}$ hours. On average, how many kilowatts did Susan use per hour? NO CALCULATOR. You must show your calculations to receive credit.
4. It took Melanie $\frac{1}{3}$ of an hour to ride her bike $2\frac{3}{4}$ of a mile. How many miles per hour can Melanie ride her bike? NO CALCULATOR. You must show your calculations to receive credit.

5. Steve uses the formula $r = \frac{d}{g}$ to determine the miles per gallon his car travels. He knows that d is the distance he travels between fill-ups, and g is the number of gallons required to fill his gas tank. If Steve travels 282.5 miles between fill-ups, and it takes 12.5 gallons of gas to fill his tank, how many miles per gallon does his car travel?

6. A farmer wants to determine how many pounds of fruit he can pick per minute. He finds that he can pick 6 pounds of fruit in 4 minutes, so he plots the point (4, 6) on a graph. If the farmer uses this point to make a line showing the relationship between the number of minutes he spends picking fruit and the number of pounds of fruit he picks, which of these points will also be on that line?

- A. (3, 2) B. (5, 10) C. (6, 9) D. (7, 9)

7. Which graph shows a proportional relationship between the values of x and y



8. Which table shows the relationship between x and y as a direct variation?

A.

x	2	4	8	10
y	5	9	17	21

B.

x	2	3	4	5
y	4	9	16	25

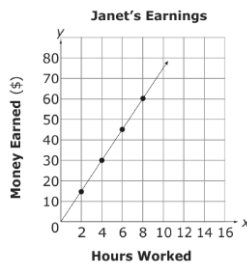
C.

x	1	3	5	6
y	4	12	20	24

D.

x	2	3	6	12
y	6	4	2	1

9. The graph below shows the amount of money Janet earned at her new job. How much does Janet earn per hour?



10. Mike bought 4.5 pounds of bananas for \$5.40. What is the price per pound for the bananas? NO CALCULATOR. You must show your calculations to receive credit.

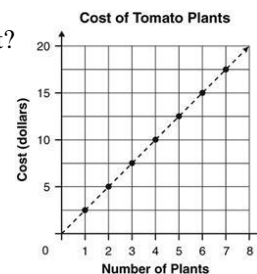
11. Maxine recorded the number of hours she worked and how much she earned each week in the table below. How much money did Maxine earn per hour?

Hours worked	Earnings
8	\$92.00
12	\$138.00
15	\$172.50
17	\$195.50

for 4 weeks

12. A 14-pound bag of dog food costs \$16.24, and a 30-pound bag of dog food costs \$33.30. Which statement is true and can be used to determine the better buy?
- The unit rate per pound of a 14-pound bag is \$0.05 less than the unit rate of a 30-pound bag.
 - The unit rate per pound of a 14-pound bag is \$0.05 more than the unit rate of a 30-pound bag.
 - The unit rate per pound of a 14-pound bag is \$0.50 less than the unit rate of a 30-pound bag.
 - The unit rate per pound of a 14-pound bag is \$0.50 more than the unit rate of a 30-pound bag.

13. The graph below shows the cost of tomato plants for each plant purchased. What is the cost of one tomato plant?



14. A machine printed 63 booklets every 6 hours. At this rate, which proportion could be used to determine x , the number of booklets that the machine can print in 9 hours?

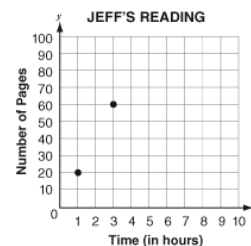
A. $\frac{63}{6} = \frac{x}{9}$ B. $\frac{63}{6} = \frac{9}{x}$ C. $\frac{63}{9} = \frac{x}{6}$ D. $\frac{63}{9} = \frac{6}{x}$

15. Using the data from the table, which equation represents the relationship between x and y values?

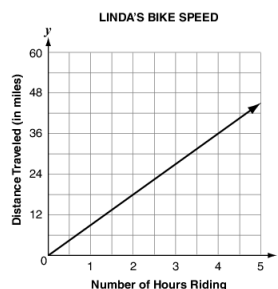
x	y
-3	36
-1	12
2	-24
6	-72

A. $y = 33 + x$ B. $y = 24 + x$ C. $y = 12x$ D. $y = -12x$

16. The graph below shows how the number of pages Jeff reads is related to the number of hours he spends reading. If Jeff continues to read at the same rate as shown in the graph, how many hours would it take him to read 90 pages?



17. The graph below shows the relationship between the number of hours Linda rides her bike and the distance she travels. How many miles does Linda travel in 1 hour?



18. Jessie bought a \$15 DVD on sale for \$12. What percentage discount did Jessie receive on the DVD?
19. Bill answered 38 out of 45 questions correctly on his first science test. At this rate, approximately how many questions can Bill expect to answer correctly if his next test has 55 questions?
20. A salesperson gets a 3% commission on the sale of a copy machine. What is his commission on a copy machine that costs \$4,950.00?