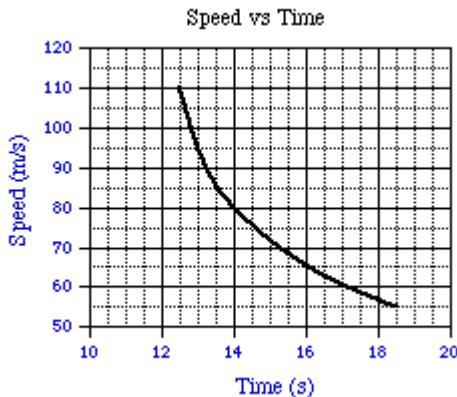


1. Describe the relationship between the variables shown in the graph below.

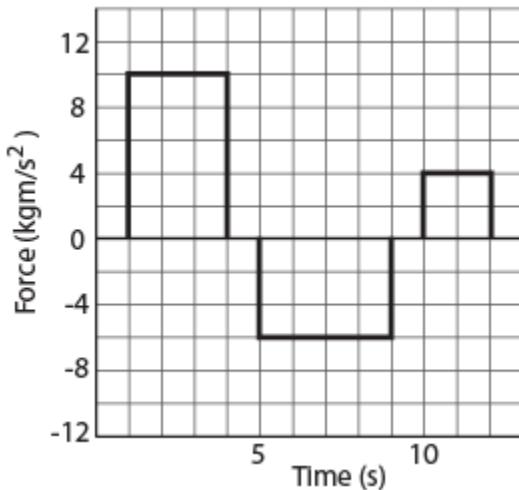


Identify the general equation that is used to represent this type of relationship.

2. Identify the slope and y-intercept of the equation  $y = 3x + 6$
3. If  $v = 15.5$  m/s and  $t = 12$  s, find  $d$  using  $d = vt$ .
4. The total mass of four containers is 5.000 kg. If the mass of Container A = 256 mg, Container B is 5117 cg, and Container C is 382 g, what is the mass of Container D?
5. State the number of significant digits in 3809 m.
6. State the number of significant digits in 0.0045 m.

### Practice Ph11 1-1

7. Determine the area under the graph below.



8. The valid digits in a measurement are called ?.

9. When the graph of best fit is a straight line, the dependent and independent variables have a(n) ? relationship.

10. On a graph, the ? is the ratio of the vertical change to the horizontal change.

11. A body has a velocity of 72 km/hr. Find its value in m/s.

12. In scientific notation, a number between 1 and 10 is multiplied by

- any whole number
- a whole-number power of 10
- a fraction
- 10

13. When multiplying quantities expressed in scientific notation ( $M \times 10^n$ ) that have different exponents, you multiply the values of M and \_\_\_\_\_ the exponents.

- divide
- add
- multiply
- subtract

14. A variable that can be manipulated in an experiment is

- responding variable
- a dependent variable
- an independent variable
- none of these

15. What is indicated by a smooth, upward curving line on a graph?

- No relationship between  $x$  and  $y$  is indicated
- a linear relationship
- an inverse relationship between  $x$  and  $y$
- a direct relationship between  $y$  and with the square of  $x$

### Practice Ph11 1-1

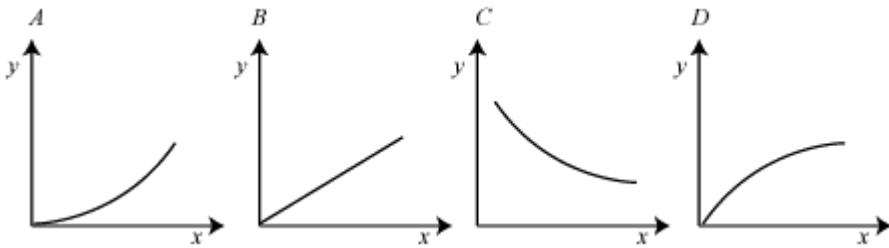
16. The slope of a straight-line graph is the vertical change \_\_\_\_\_ the horizontal change.

- a) added to
- b) minus
- c) multiplied by
- d) divided by

17. A graph that is a hyperbola represents \_\_\_\_\_ relationship.

- a) no
- b) an inverse
- c) a quadratic
- d) a linear

Use the following graphs to answer the next 3 questions.



18. Which graph represents an inverse relationship?

- a) A
- b) B
- c) C
- d) D

19. Which graph represents a linear relationship?

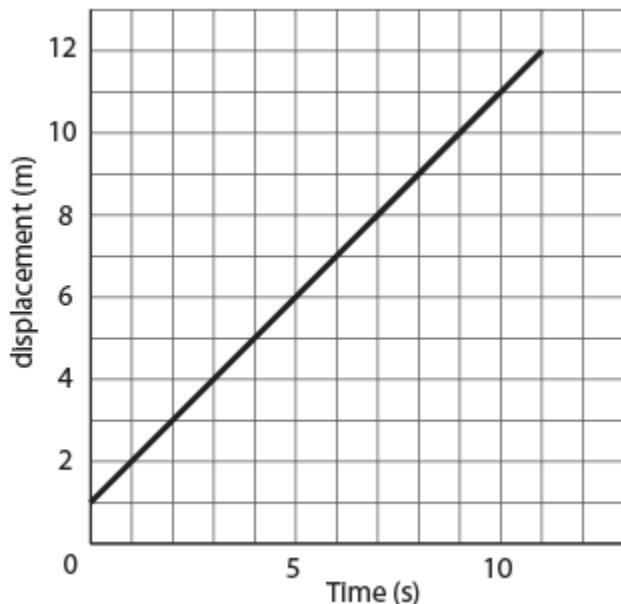
- a) A
- b) B
- c) C
- d) D

20. Which graph represents a square relationship?

- a) A
- b) B
- c) C
- d) D

Practice Ph11 1-1

21. Determine the slope of the graph below.



- a) 1.1 m/s
- b) 1 m/s
- c) 0.9 m/s
- d) 0.5 m/s

22. T F The SI system uses three base units.

23. 1 micrometer ( $1 \mu\text{m}$ ) equals:

- a)  $10^{-3}$  m
- b)  $10^3$  m
- c)  $10^6$  m
- d)  $10^{-6}$  m

24. What is the volume of a cube whose side is 10 cm?

- a)  $10^3$  m<sup>3</sup>
- b)  $10^{-3}$  m<sup>3</sup>
- c)  $10$  m<sup>3</sup>
- d)  $10^2$  m<sup>3</sup>