College Board

Sample Questions

Directions for questions 1–20

For each of the questions below, choose the best answer from the four choices given.

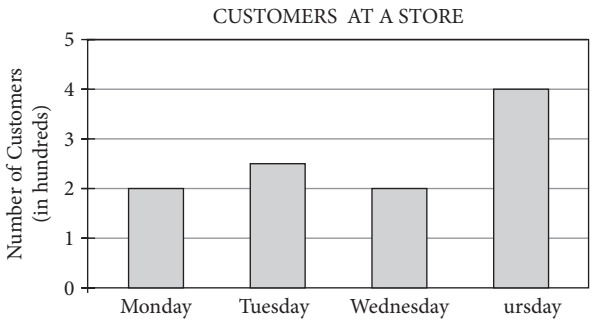
1. If there are 2.2 pounds in 1 kilogram, how many pounds are there in x kilograms? **[basic]**

   A. $\frac{x}{2.2}$

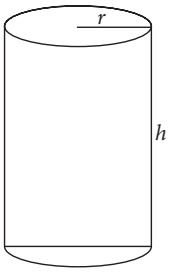
   B. $2.2x$

   C. $2.2 + x$

   D. $\frac{2.2}{x}$

2. 

   e bar graph above shows the number of customers who shopped at a store Monday through ursday of one week. If the number of customers on Friday was a one- h increauf cusf cuAu,f.0n er of cuomers os

7. 

e formula for the volume of the right circular cylinder shown is $V = \pi r^2 h$.

If r

16. Reyna has 5 coins worth 10 cents each and 4 coins worth 25 cents each. If she chooses two of these coins

Answer Key

1. B
2.
3. D
4. C
5. B
6. B
7. B
8. B
9. D
10. C
11. B
12.
13. D
14. D
15. C
16. C
17.
18. B
19. D
20. D

10. Choice C is the correct answer. xy plane is in

x

$y = mx - 4$ is m $y = x - 4$ is 1 $y = mx - 4$

$y = x - 4$ $m < 1$

11. Choice B is the correct answer. 12 77

$12 \times 77 = 924$ 9

averaged 91 $9 \times 91 = 819$

$12 + 9 = 21$ $924 + 819 = 1\,743$

$1\,743 \div 21 = 83$

12. Choice A is the correct answer. $(3x - 12)(x + 4)$

$3(x - 4)(x + 4) = 3(x^2 - 16)$

$3x^2 - 48$ $3(x^2 - 16)$ and $3x^2$

18. Choice B is the correct answer.

$$A = \frac{1}{2}bh$$

$\frac{1}{2}(x+1)x = \frac{x^2+x}{2}$ 21 $\frac{x^2+x}{2} = 21$

$x^2 + x - 42 = 0$ $x^2 + x - 42 = (x+7)(x-6) = 0$ for x gives $x = -7$

$x = 6$ -7 x 6

19. Choice D is the correct answer. f is not

$x = 4$ $f(4) = \sqrt{4-4^2} = \sqrt{-12}$

$f(-2) = f(2) = \sqrt{4-4} = 0,$ $f(0) = \sqrt{4-0^2} = 2$

f $x = 4$

20.