

1. 060223a, P.I. A.N.5
If the instructions for cooking a turkey state "Roast turkey at 325° for 20 minutes per pound," how many hours will it take to roast a 20-pound turkey at 325° ?
[A] 7,200 [B] 160 [C] 5,400 [D] 90
2. 080814ia, P.I. A.N.5
Nicole's aerobics class exercises to fast-paced music. If the rate of the music is 120 beats per minute, how many beats would there be in a class that is 0.75 hour long?
[A] 7,200 [B] 160 [C] 5,400 [D] 90
3. 010117a, P.I. A.N.5
In a molecule of water, there are two atoms of hydrogen and one atom of oxygen. How many atoms of hydrogen are in 28 molecules of water?
[A] 29 [B] 42 [C] 14 [D] 56
4. 060505a, P.I. A.N.5
A cake recipe calls for 1.5 cups of milk and 3 cups of flour. Seth made a mistake and used 5 cups of flour. How many cups of milk should he use to keep the proportions correct?
[A] 1.75 [B] 2 [C] 2.5 [D] 2.25
5. 080809a, P.I. A.N.5
If a machine that prints designs on T-shirts prints 500 shirts in 3 hours, how many hours will it take to print designs on 1,800 shirts?
[A] 10.8 [B] 6 [C] 12 [D] 9.8
6. 010431a, P.I. A.N.5
Julio's wages vary directly as the number of hours that he works. If his wages for 5 hours are \$29.75, how much will he earn for 30 hours?
7. 080101a, P.I. A.N.5
The perimeter of an equilateral triangle varies directly as the length of a side. When the length of a side is doubled, the perimeter of the triangle is
[A] multiplied by 3 [B] doubled
[C] divided by 3 [D] halved
8. 060215a, P.I. A.N.5
If the circumference of a circle is doubled, the diameter of the circle
[A] is multiplied by 4
[B] is doubled
[C] increases by 2 [D] remains the same

9. 080005a, A.N.5

Which table does *not* show an example of direct variation?

[A]

x	y
1	$\frac{1}{2}$
2	1
3	$\frac{3}{2}$
4	2

[B]

x	y
2	24
4	12
6	8
8	6

[C]

x	y
-4	-20
-3	-15
-2	-10
-1	-5

[D]

x	y
1	4
2	8
3	12
4	16

10. 010708a, P.I. A.N.5

Which equation represents the direct variation relationship of the equation $\frac{x}{y} = \frac{1}{2}$?

[A] $x = 2y$

[B] $y = x + \frac{1}{2}$

[C] $y = 2x$

[D] $y = 3x$

11. 010806a, P.I. A.N.5

If x varies directly as y , and $x = 8$ when $y = 24$, what is the value of x when $y = 6$?

[A] 1

[B] 4

[C] 3

[D] 2

12. 010902a, P.I. A.N.5

Granola bars cost \$0.55 each. Which table represents this relationship?

[A]

Number of Bars	Total Cost
0	\$0.55
2	0.55
4	0.55

[B]

Number of Bars	Total Cost
0	\$0.00
2	1.00
4	2.00

[C]

Number of Bars	Total Cost
0	\$0.00
2	1.10
4	2.20

[D]

Number of Bars	Total Cost
0	\$0.55
2	1.10
4	2.20

13. 010933ia, P.I. A.N.5

The table below represents the number of hours a student worked and the amount of money the student earned.

Number of Hours (h)	Dollars Earned (d)
8	\$50.00
15	\$93.75
19	\$118.75
30	\$187.50

Write an equation that represents the number of dollars, d , earned in terms of the number of hours, h , worked. Using this equation, determine the number of dollars the student would earn for working 40 hours.

[2] $6\frac{2}{3}$ or 6 hr 40 min or $6.\overline{66}$ or an

equivalent answer, and appropriate work is shown.

[1] 400 min, but the answer is not converted into hours.

or [1] Appropriate work is shown, but one computational error is made.

or [1] Appropriate work is shown, but the answer is rounded to the nearest hour.

or [1] $6\frac{2}{3}$ or 6 hr 40 min or $6.\overline{66}$ or an

equivalent answer, but no work is shown.

[0] A zero response is completely incorrect, irrelevant, or incoherent or is a correct response that was obtained by an obviously

[1] incorrect procedure.

[2] C

[3] D

[4] C

[5] A

[2] \$178.50, and appropriate work is shown, such as solving a proportion, using a table, or trial and error with at least three trials and appropriate checks.

[1] Appropriate work is shown, but one computational error is made.

or [1] An appropriate proportion is set up, but no solution or an incorrect solution is found.

or [1] An incorrect proportion is set up, but an appropriate solution is found.

or [1] \$178.50, but no work is shown or fewer than three trials with appropriate checks are shown.

[0] A zero response is completely incorrect, irrelevant, or incoherent or is a correct response that was obtained by an obviously

[6] incorrect procedure.

[7] B

[8] B

[9] B

[10] C

[11] D

[12] C

[2] $d = 6.25h$ or an equivalent equation and 250, and appropriate work is shown.

[1] Appropriate work is shown, but one computational error is made.

or [1] Appropriate work is shown, but one conceptual error is made.

or [1] A correct equation is written, but no further correct work is shown.

or [1] Appropriate work is shown to find 250, but the equation is missing or is incorrect.

[0] 250, but no work is shown.

or [0] A zero response is completely incorrect, irrelevant, or incoherent or is a correct response that was obtained by an

[13] obviously incorrect procedure.