2014 Unit 1a Test

Name:_____

Date:_____

1 Solve $8(c - 5) - 3c = 15$.

A 4
B 5
C 11
D 15

2 There are 60 pages in your journal. If you have already used 8 pages and you will use 4 pages per week, how many more weeks will your journal last?

A 9
B 17
C 13
D 8

3 Solve the equation.

$-6 = \frac{x}{8} + 4$

A –80
B 16
C –16
D 1.8

4 Solve the equation.

$11 = -d + 15$

A 11
B –4
C 4
D 6

5 Solve the equation.

$2 = \frac{10 + z}{-3}$

A –4
B –16
C 15
D –5

6 Solve the equation.

$3(y + 6) = 30$

A 5
B 16
C 4
D –16

7 Solve the equation.

$4.9x + 4.4 = 19.1$

A 4
B 3
C 4.8
D 7.2

8 Solve the equation.

$5x – 5 = 3x – 9$

A –2
B 1
C –1
D –3

9 You are driving to visit a friend in another state who lives 440 miles away. You are driving 55 miles per hour and have already driven 275 miles. Choose and solve the equation showing how much longer, in hours, you must drive to reach your destination.

A $55h + 275 = 440$; $h = 3$
B $55h - 275 = 440$; $h = 13$
C $440h - 275 = 55$; $h = 0.75$
D $55h + 275h = 440$; $h = 1.\overline{3}$

10 A customer went to a garden shop and bought some potting soil for $17.50 and 4 shrubs. The total bill was $53.50. Choose the equation that models this situation and solve to find the price p of each shrub.

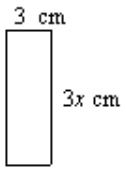
A $4p + \$17.50 = \$53.50$; $p = \$9.00$
B $4(p + \$17.50) = \$53.50$; $p = \$4.00$
C $4p + 17.5p = \$53.50$; $p = \$2.49$
D $4p + \$17.50 = \$53.50$; $p = \$11.25$

11 Find the value of y.

$-6y + 14 + 4y = 32$

A 18
B 1.8
C –9
D 9

12 The perimeter of the rectangle is 24 cm. Find the value of x.



A 3
B 12
C $\frac{8}{3}$
D 18

13 Solve the equation.
$-4h - 8 = 20 - 8h$

A –7
B 7
C 5
D 8

14 Solve the equation.
$-2(m - 30) = -6m$

A –15
B –13
C –8
D 8

15 Which equation is an identity?

A $11 - (2v + 3) = -2v - 8$
B $5w + 8 - w = 6w - 2(w - 4)$
C $7m - 2 = 8m + 4 - m$
D $8y + 9 = 8y - 3$

16 Tell whether the equation has *one solution*, *many solutions* or *no solutions*.
$4p - 2p = 2(p - 8)$

A one solution
B many solutions
C no solutions

17 Choose the algebraic expression that matches the phrase.
–2 times the quantity q minus 3

A $-2q - 3$
B $q(-2 - 3)$
C $\frac{-2}{q - 3}$
D $-2(q - 3)$

18 Solve the equation.

$-12x = -48$

A 576
B 4
C –4
D $\frac{1}{4}$

19 Solve the equation.

$\frac{j}{-11} = -11$

A 0
B –22
C –121
D 121

20 Solve the equation.

$w + 28 = 23$

A –51
B 5
C –5
D 51

21 Tom saves $5 each month. At this rate, how many months will he need to save $20?

A 4 months
B 15 months
C 3 months
D 5 months

22 Simplify the expression.

$4(20 + 12) \div (4 - 3)$

A 29
B 80
C 128
D 92

23 Simplify the expression.

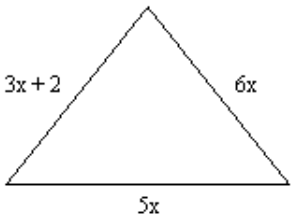
$3^3 \times 32 + 12 \div 4$

A 291
B 219
C 437
D 867

24 Evaluate $b - 2a - c$ for $a = -7$, $b = 3$, and $c = -7$.

A 24
B 3
C 10
D –18

25 What is the perimeter of the figure?



not to scale

A $9x + 7x$
B $11x + 3x + 2$
C $14x + 2$
D $14x$

26 Simplify.

$(-7x - 5x^4 + 5) - (-7x^4 - 5 - 9x)$

A $2x^4 + 2x + 8$
B $-14x^4 + 10x + 10$
C $-14x^4 - 10x + 10$
D $2x^4 + 2x + 10$

27 What is the simplified form of $\left(-7x^3+5x^2-x+6\right)-\left(-8x^3+x^2+3\right)$?

A $-x^3+4x^2-x+3$
B x^3+4x^2-x+3
C x^3-4x^2-x-3
D $-15x^3+6x^2-x+9$

28 Simplify the sum.
$(b^2 + 5b + 2) + (b^2 + 9b – 4)$

A $2b^4 + 14b^2 – 2$
B $–b^2 + 4b – 6$
C $2b^2 + 14b – 2$
D $b^2 + 14b – 2$

29 Simplify.
$(4u^3 + 4u^2 + 2) + (6u^3 – 2u + 8)$

A $10 – 2u + 4u^2 + 10u^3$
B $–2u^3 – 2u^2 + 4u – 10$
C $–2u^3 + 4u^2 – 2u + 10$
D $10u^3 + 4u^2 – 2u + 10$