Friday, January 20th

No warm up today!

Have out your homework, a pencil, a calculator, and your index card.

Make sure phones are off and away.

Homework Answers

1) D 2) B 3) A 4) C

5) D 6) A 7) C 8) A

9) D 10) A 11) B 12) D

Algebra 1 Name_____ ID: 1

U7 Quiz 2 Review

Date_____ Period____

Factor the common factor out of each expression.

1) $54n^2 - 42$
A) $6(18n^3 - 14n)$
B) $6(n^2 - 7)$
C) $6(9n^3 - 35)$
D) $6(9n^2 - 7)$

2) $36b^3 + 40b + 4$
A) $4(36b^3 + 40b + 4)$
B) $4(9b^3 + 10b + 1)$
C) $b(9b^3 + b + 1)$
D) $4(9b^4 + 10b + 1)$

3) $63vu - 36v$
A) $9v(7u - 4)$
B) $9v(-4v + 7u)$
C) $9v^2(7u - 4)$
D) $9v(21uv - 12v)$

4) $-8xy^5 + 9x^2$
A) $x^2(-8y^5 + 9xy)$
B) $x(-8y^5 + 9xy)$
C) $x(-8y^5 + 9x)$
D) $x(-8y^4 + 9x)$

Factor each completely.

5) $x^2 + 10x + 16$
A) $(x - 8)(x - 2)$
B) $(x + 10)(x + 8)$
C) $(x - 2)(x + 8)$
D) $(x + 2)(x + 8)$

6) $a^2 + 11a + 10$
A) $(a + 1)(a + 10)$
B) $(a + 1)(a - 10)$
C) $(a + 1)(a + 9)$
D) $(a - 1)(a + 10)$

7) $p^2 - 7p - 8$
A) $(p + 9)(p + 5)$
B) $(p - 10)(p - 7)$
C) $(p + 1)(p - 8)$
D) $(p - 5)(p + 6)$

8) $n^2 - 15n + 50$
A) $(n - 10)(n - 5)$
B) $(n - 10)(n + 5)$
C) $(n + 9)(n - 7)$
D) Not factorable

9) $7x^2 + 16x + 4$
A) Not factorable
B) $(2x + 7)(x - 7)$
C) $(x + 2)(7x - 2)$
D) $(7x + 2)(x + 2)$

10) $3x^2 - 11x + 6$
A) $(3x - 2)(x - 3)$
B) $(3x - 2)(x + 3)$
C) $(3x + 2)(x + 3)$
D) $3(x - 2)(x + 1)$

11) $4b^2 - 8b + 3$
A) $(2b + 3)(2b + 1)$
B) $(2b - 3)(2b - 1)$
C) $(2b + 3)(2b - 1)$
D) $(2b - 5)^2$

12) $4x^2 + x - 3$
A) $(4x + 1)(x - 3)$
B) $(x - 1)(6x + 1)$
C) $(x + 3)(4x + 7)$
D) $(x + 1)(4x - 3)$

① quiz

② PSAT questions (#1-10 only)
- do all work on scratch paper

③ Review

1) D 2) A 3) B 4) C 5) C

6) B 7) A 8) B 9) C 10) D

3

3

1

Which of the following is an equivalent form of the expression $15x + 24ax$?

A) $39ax^2$

B) $39(a + 2x)$

C) $(5 + 8a)x$

D) $(15 + 24a)x$

2

The formula $d = rt$ is used to calculate the distance an object travels over a period of time, t, at a constant rate, r. Based on this formula, what is the rate, r, in terms of d and t ?

A) $r = \frac{d}{t}$

B) $r = dt$

C) $r = \frac{t}{d}$

D) $r = d - t$

3

Which of the following ordered pairs (x, y) satisfies both equations $y = x^2 + 3x - 4$ and $x = y - 4$?

A) $(0, -4)$ $x=0$ $y=-4$

B) $(2, 6)$

C) $(3, 14)$

D) $(5, 9)$

4

Which of the following is a solution to the equation $2x^2 + 4x = 3 + 3x^2$?

~~A) 1~~

B) 0

C) 3

D) 6

if you plug it in, you get a true answer

$2(-1)^2 + 4(-1) = 3 + 3(-1)^2$

$2(1) + 4(-1) = 3 + 3(1)$

$2 - 4 = 3 + 3$

$-2 = 6$

CONTINUE

3  3

5

$$-3x - 4y = 20$$
$$x - 10y = 16$$

If (x, y) is the solution to the system of equations above, what is the value of x ?

A) -14

B) -12

C) -4

D) 16

6

The equation $y = 36 + 18x$ models the relationship between the height y, in inches, of a typical golden delicious apple tree and the number of years, x, after it was planted. If the equation is graphed in the xy-plane, what is indicated by the y-intercept of the graph?

A) The age, in years, of a typical apple tree when it is planted

B) The height, in inches, of a typical apple tree when it is planted

C) The number of years it takes a typical apple tree to grow

D) The number of inches a typical apple tree grows each year

7

Giovanni wants to buy shirts that cost $19.40 each and sweaters that cost $24.80 each. An 8% sales tax will be applied to the entire purchase. If Giovanni buys 2 shirts, which equation relates the number of sweaters purchased, p, and the total cost in dollars, y ?

A) $1.08(38.80 + 24.80p) = y$

B) $38.80 + 24.80p = 0.92y$

C) $38.80 + 24.80p = 1.08y$

D) $0.92(38.80 + 24.80p) = y$

8

A line is graphed in the xy-plane. If the line has a positive slope and a negative y-intercept, which of the following points cannot lie on the line?

A) $(-3, -3)$

B) $(-3, 3)$

C) $(3, -3)$

D) $(3, 3)$

CONTINUE

3

3

9

A parachute design uses 18 separate pieces of rope. Each piece of rope must be at least 270 centimeters and no more than 280 centimeters long. What inequality represents all possible values of the total length of rope x, in centimeters, needed for the parachute?

A) $270 \leq x \leq 280$

B) $4{,}860 \leq x \leq 4{,}870$

C) $4{,}860 \leq x \leq 5{,}040$

D) $5{,}030 \leq x \leq 5{,}040$

10

A carpenter has \$60 with which to buy supplies. The carpenter needs to buy both nails and screws. Nails cost \$12.99 per box, and screws cost \$14.99 per box. If n represents the number of boxes of nails and s represents the number of boxes of screws, which of the following systems of inequalities models this situation?

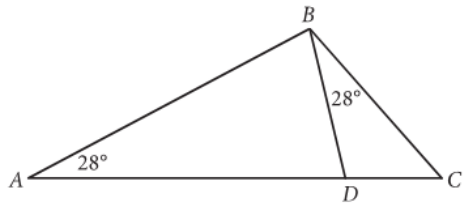
A) $\begin{cases} 12.99n + 14.99s \geq 60 \\ n + s \leq 1 \end{cases}$

B) $\begin{cases} 12.99n + 14.99s \leq 60 \\ n + s \leq 1 \end{cases}$

C) $\begin{cases} 12.99n + 14.99s \geq 60 \\ n \geq 1 \\ s \geq 1 \end{cases}$

D) $\begin{cases} 12.99n + 14.99s \leq 60 \\ n \geq 1 \\ s \geq 1 \end{cases}$

11



In the figure above, which of the following ratios has the same value as $\frac{AB}{BC}$?

A) $\frac{BD}{DC}$

B) $\frac{BC}{AC}$

C) $\frac{AD}{BD}$

D) $\frac{DC}{BC}$

CONTINUE

For HW...

#1, 3, 5, 7, 10, 14, 15