TALIS Video Study

Final Pretest

Draft 2

August 31, 2017

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Question 1 QuestionAB 1

If $n + 5 = 15$, what is n ?

A. −20

B. −10

C.   10

D.   20

Question 2 QuestionAA 2

$-4.3 + 1.2 + (-5.7) =$

A.   8.8

B.   2.6

C.   −8.8

D.   −11.2

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Question 3 QuestionAA 3

$4 \times (-8) =$

A. -32

B. -4

C. 12

D. 32

Question 4 QuestionAB 2

Which of the following are pairs of numbers a, b so that $a + b = 2154$?

A. $a = 1198, \ b = 856$

B. $a = 1298, \ b = 856$

C. $a = 1398, \ b = 856$

D. $a = 1498, \ b = 856$

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Question 5 QuestionAA 4

Which of the following numbers is NOT a divisor of 258 ?

A.   6

B.   9

C.   43

D. 129

Question 6 QuestionAB 4

What is 1,092 as a product of prime numbers?

A. $(2)(3)(91)$

B. $(2)(3)(7)(13)$

C. $(2)(3)(7^2)(13)$

D. $(2^2)(3)(7)(13)$

Question 7 QuestionAB 5

$\sqrt{64}$ =

A.   8

B.   16

C.   32

D. 128

Question 8 QuestionAA 6

$$\sqrt{4} + \sqrt{16} - \sqrt{1} =$$

A. $4 + 16 - 1$

B. $2 + 4 - 1$

C. $2 + 8 - 1$

D. $16 + 256 - 1$

Question 9 QuestionAA 16

What numbers squared are equal to 9 ?

A. -81 and 81

B. -9 and 9

C. -3 and 3

D. $-\dfrac{1}{9}$ and $\dfrac{1}{9}$

Question 10 QuestionAA 7

If $5a + 5 = 25,$ which of the following is true?

A. $a = 20$

B. $5a = 20$

C. $5a = 30$

D. $a + 5 = 5$

Question 11 QuestionAB 7

If $3x = 0$, then $x =$

A. -3

B. 0

C. $\dfrac{1}{3}$

D. There is no solution because division by zero is undefined.
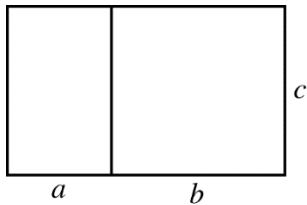
Question 12 QuestionAA 9

If $ab \neq 0$, what must be true for a and b?

A. $a \neq 0$ and $b \neq 0$

B. $a \neq 0$ and $b = 0$

C. $a = 0$ and $b \neq 0$

D. $a = 0$ and $b = 0$

Question 13 QuestionAA 11

A large rectangle and some of its measurements, in centimeters, are shown in the figure. Which of the following algebraic expressions represents the area, in square centimeters, of the large rectangle?

A. abc

B. $(a+b)c$

C. $(a+c)b$

D. $(b+c)a$

Question 14 QuestionAB 10

$$-4(x + 2y) + 3(x + 5y) =$$

A. $-x + 7y$

B. $2x - 6y$

C. $5x + 9y$

D. $-x - 3y$

Question 15 QuestionAA 12

$$(3x+2)(2x-3) =$$

A. $6x^2 + 6$

B. $6x^2 + 4x - 6$

C. $6x^2 - 9x - 6$

D. $6x^2 - 5x - 6$

Question 16 QuestionAA 13

$$(y+8n)(y-8n)=$$

A. $y^2+16ny-64n^2$

B. $y^2-16ny+64n^2$

C. y^2+64n^2

D. y^2-64n^2

Question 17 QuestionAA 14

$x^2 - 81 =$

A. $(x-9)(x-9)$

B. $x(x-81)$

C. $(x+9)(x-9)$

D. $(x+9)(x+9)$

Question 18 QuestionAB 12

$6x^2 - x - 1 =$

A. $(3x - 1)(2x - 1)$

B. $(3x - 1)(2x + 1)$

C. $(3x + 1)(2x - 1)$

D. $(3x + 1)(2x + 1)$

Question 19 QuestionAB 13

$(x-3)(x+5) =$

A. $x^2 - 15$

B. $x^2 - 3x + 5$

C. $x^2 - 3x + 15$

D. $x^2 + 2x - 15$

Question 20 QuestionAA 15

$$\left(3x-2\right)^2 =$$

A. $9x^2 + 4$

B. $9x^2 - 12x + 4$

C. $3x^2 - 12x + 4$

D. $6x^2 - 12x + 4$

Question 21 QuestionAA 17

In Xuhui Park, there is a rectangular field with a width of 12 meters, and a length of 16 meters. What is the area of the field?

A.   28 square meters

B.   84 square meters

C.   192 square meters

D.   1,112 square meters

Question 22 QuestionAA 18

If $\sqrt{5} < a < \sqrt{30}$, which of the following integers is a solution, *a,* to the inequality?

A.   3

B.   6

C. 12

D. 25

Question 23 QuestionAA 22

Canoe Rental
$8 per hour
$5 per life jacket

Kia and two friends rented a canoe. Each person must have a life jacket. If the total bill was $43, for how many hours did they rent the canoe?

A. 3.5 hours

B. 4.75 hours

C. 6 hours

D. 7.25 hours

Question 24 QuestionAA 24

Which of the following equations has the solution, $x = 9$?

A. $5x + 1 = 3(x + 3)$

B. $5 - 3(7x - 2) = 4$
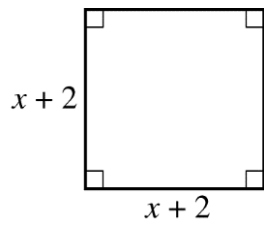
C. $\dfrac{2x + 3}{3} = \dfrac{4x - 1}{5}$

D. $0.5x - 1.5 = -x + 6$

Question 25 QuestionAA 10

$$(5x + y - 7) + (6y - x + 54) =$$

A. $11y + 47$

B. $4x + 7y + 47$

C. $6x + 7y + 61$

D. $5x + 6y - 47$
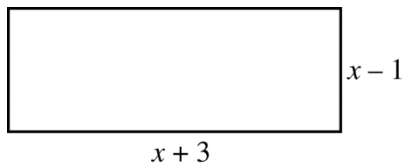
Question 26 QuestionAA 28

A square with side lengths of $x+2$ centimeters is shown in the figure. What is the area of the square, in square centimeters?

A. $x^2 + 2$

B. $x^2 + 4x + 4$

C. $x^2 + 4$

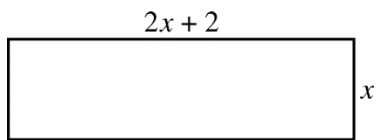D. $x^2 + 2x + 2$

Question 27 QuestionAA 29

$x - 1$

$x + 3$

The figure above shows the measures of the sides, in meters, of a rectangular plot of land. What is the area of the plot, in square meters?

A. $2x^2 - 2x + 3$

B. $2x^2 + 2x - 3$

C. $x^2 + 2x - 3$

D. $x^2 + 2x + 3$

Question 28 QuestionAA 30

$$2x + 2$$

x

If the area of the rectangle shown above is 24, what is the value of x ?

A. $x = 8$

B. $x = 7\dfrac{1}{3}$

C. $x = 4\dfrac{1}{2}$

D. $x = 3$

Question 29 QuestionAA 31

$$4\left(x^2 + 6x + 9\right) =$$

A. $4\left(x - 3\right)^2$

B. $\left(4x + 3\right)^2$

C. $4\left(x + 3\right)^2$

D. $\left(4x - 3\right)^2$

Question 30 QuestionAA 26

$x^2 + 7x + 10 =$

A. $(x-7)^2$

B. $(x-1)(x+5)$

C. $(x-3)(x-7)$

D. $(x+2)(x+5)$

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PRETEST Final FORM

Item sequence	Number of Pilot	Code	KEY
1	AB01	2.a.i	C
2	AA02	1.a	C
3	AA03	1.b	A
4	AB02	1.a	B
5	AA04	1.c	B
6	AB04	1.c	D
7	AB05	1.d	A
8	AA06	1.e	B
9	AA16	3.b	C
10	AA07	1.g	B
11	AB07	1.g	B
12	AA09	2.b.ii	A
13	AA11	2.c.i	B
14	AB10	2.c.i	A
15	AA12	2.d.ii	D
16	AA13	2.d.iv	D
17	AA14	2.d.iv	C
18	AB12	2.d.ii	C
19	AB13	2.d.iii	D
20	AA15	2.d.v	B
21	AA17	1.b	C
22	AA18	1.e	A
23	AA22	2.a.i	A
24	AA24	2.a.ii	C
25	AA10	2.c.i	B
26	AA28	2.d.v	B
27	AA29	3.a.i	C
28	AA30	3.a.i	D
29	AA31	3.c	C
30	AA26	2.d.i	D