Algebra 1 *(Swanick)*

PSSA REVIEW QUIZ #1

Domains 1 & 2

Name: _____ Date: _____ Period: _____

1. _____ 2. _____ 3. _____ 4. _____ 5. _____

6. _____ 7. _____ 8. _____ 9. _____ 10. _____

11. _____ 12. _____ 13. _____ 14. _____ 15. _____

16. _____ 17. _____ 18. _____ 19. _____ 20. _____

21. _____ 22. _____ 23. _____ 24. _____ 25. _____

26. _____ 27. _____ 28. _____ 29. _____ 30. _____

Algebra 1 (Swanick)   Name_____

PSSA Review Quiz #1A (Domains 1 & 2)   Date_____ Period____

Find each square root. Round to the nearest tenth.

1) $\sqrt{127}$

   A) 3.4   B) 63.5

   C) 3.5   D) 11.3

2) $\sqrt{110}$

   A) 55   B) 10.5

   C) 9.5   D) 3.2

3) $\sqrt{101}$

   A) 9   B) 10

   C) 50.5   D) 3.6

4) $\sqrt{54}$

   A) 7.3   B) 27

   C) 2.7   D) 2916

Write each as a fraction.

5) $0.\overline{75}$

   A) $25\dfrac{33}{100}$ B) $1\dfrac{151}{330}$

   C) $75\dfrac{25}{33}$ D) $\dfrac{25}{33}$

6) $0.\overline{58}$

   A) $58\dfrac{99}{100}$ B) $117\dfrac{49}{50}$

   C) $58\dfrac{58}{99}$ D) $\dfrac{58}{99}$

7) $0.\overline{3}$

   A) $\dfrac{1}{3}$ B) $1\dfrac{3}{10}$

   C) $33\dfrac{1}{3}$ D) $\dfrac{121}{300}$

8) $8.\overline{6}$

   A) $8\dfrac{2}{3}$ B) 263

   C) $86\dfrac{2}{3}$ D) $76\dfrac{2}{3}$

Write each number in scientific notation.

9) 2.95

   A) 29.5×10^1 B) 29.5×10^0

   C) 29.5×10^2 D) 2.95×10^0

10) 8140

   A) 81.4×10^3 B) 81.4×10^{-2}

   C) 8.14×10^3 D) 81.4×10^4

Write each number in standard notation.

11) 5.58×10^5

   A) 5580000   B) 558000000

   C) 558000   D) 55800000

12) 7.4×10^{-2}

   A) 7.4   B) 0.74

   C) 0.074   D) 74

Simplify. Write each answer in scientific notation.

13) $(9.7 \times 10^1)(8 \times 10^{-2})$

   A) 1.213×10^4 B) 1.213×10^3

   C) 7.76×10^0 D) 0.776×10^0

14) $(8.21 \times 10^3)(4.11 \times 10^0)$

   A) 3.374×10^4 B) 33.74×10^5

   C) 33.74×10^4 D) 3.374×10^3

PSSA Review Quiz #1B (Domains 1 & 2)

Solve each system.

15) $5x - y = 25$
$-5x + 3y = -15$

A) $(6, -5)$ B) $(-7, 5)$
C) $(-7, -3)$ D) $(6, 5)$

16) $y = -5x - 12$
$3x + 7y = -20$

A) $(-2, -3)$ B) $(2, -7)$
C) $(2, 7)$ D) $(-2, -2)$

17) $y = 2x + 6$
$y = 8$

A) $(-1, -8)$ B) $(-1, 8)$
C) $(1, 8)$ D) $(1, -8)$

18) $y = -5x - 6$
$y = 8x + 20$

A) $(4, -2)$ B) $(4, 2)$
C) $(-2, 4)$ D) $(2, -4)$

Simplify. Your answer should contain only positive exponents.

19) $2^4 \cdot 2^4$

A) 2^8 B) $\dfrac{1}{2}$
C) 2^2 D) 2^{11}

20) $3^2 \cdot 3^{-4}$

A) $\dfrac{1}{3^2}$ B) 1
C) 3^8 D) 3^3

21) $\dfrac{4^{-1}}{4^3}$

A) 4^4 B) $\dfrac{1}{4^3}$

C) $\dfrac{1}{4}$ D) $\dfrac{1}{4^4}$

22) $\dfrac{3}{3^2}$

A) $\dfrac{1}{3}$ B) 3^3

C) $\dfrac{1}{3^2}$ D) 1

23) $\left(2^0\right)^{-4}$

A) 2^6 B) 1
C) 2^2 D) $\dfrac{1}{2^4}$

24) $\left(2^3\right)^{-4}$

A) 2^{12} B) $\dfrac{1}{2^2}$

C) 2^{16} D) $\dfrac{1}{2^{12}}$

Solve each equation.

25) $-27 + 2v = -5(v + 4)$

  A) $\{1\}$ B) $\{4\}$

  C) $\{-13\}$ D) $\{13\}$

26) $\dfrac{38}{25} + 2n = \dfrac{6}{5}\left(n + \dfrac{13}{5}\right)$

  A) $\{2\}$ B) $\left\{\dfrac{2}{3}\right\}$

  C) $\left\{\dfrac{3}{10}\right\}$ D) No solution.

27. Find the cube root of $\sqrt[3]{64}$.

  A) 16

  B) 4

  C) 2

  D) Does not exist

28. Find the cube root of $\sqrt[3]{-125}$.

  A) 5

  B) -5

  C) $41.\overline{6}$

  D) Does not exist

29. Solve for x. $x^3 = -216$

  A) 72

  B) -72

  C) 6

  D) -6

30. Solve for x. $x^3 = 343$

  A) $114.\overline{3}$

  B) $-114.\overline{3}$

  C) 7

  D) -7

PSSA REVIEW QUIZ #2

Name: _____   Date: _____   Period: _____

1. ___	2. ___	3. ___	4. ___	5. ___
6. ___	7. ___	8. ___	9. ___	10. ___
11. ___	12. ___	13. ___	14. ___	15. ___
16. ___	17. ___	18. ___	19. ___	20. ___
21. ___	22. ___	23. ___	24. ___	25. ___
26. ___	27. ___	28. ___	29. ___	30. ___

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1. What is the value of $(5 + 3)^2 + (5 - 3)^2$?

   A) 68   B) 70   C) 72   D) 77

2. What is the value of the expression: $2^2 - 3^2 + 4^2$

   A) 6   B) 8   C) 11   D) 14

3. Which group does not contain equivalent fractions, decimals and Percents?

   A) 10%, $\frac{1}{10}$, 0.1   B) 40%, $\frac{2}{5}$, 0.4   C) 50%, $\frac{1}{2}$, 0.5   D) 25%, $\frac{1}{4}$, 0.2

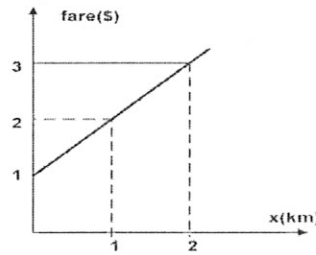4. Find the square root of $3^2 \times 4^4$?

   A) 64   B) 24   C) 48   D) 44

5. Calculate the expression $(|x - 3| + 5|x|)$ if $x = -1$.

   A) -3   B) 9   C) 10   D) 0
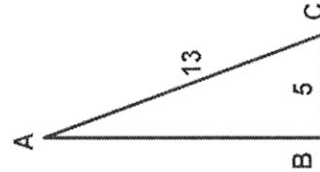
6. The cost of taxi trips vs. distance is shown in the graph below. What is the cost of a 1.5km trip?

    A) $2.50   B) $3.50

    C) $3.00   D) $4.00

7. The right triangle in the figure below has AC = 13 and BC = 5. What is the length of side AB?

    A) 17   B) 9   C) 12   D) 10

8. $3x^2 - 4x + 12 = 9$ is an:

    A) Equation   B) Inequality   C) Expression   D) Not enough information to determine.

9. The medals won by US, United Kingdom & Russia during a competition are shown in the table:

United States	United Kingdom	Russia
5	1	4

    Out of the medals won by these countries, what percentage of medals did the US win?

    A) 50%   B) 40%   C) 10%   D) 90%

10. 24lb of flour are divided into 1/3lb portions. What is the number of 1/3lb portions?

    A) 8   B) 12   C) 48   D) 72

11. Assuming that all variables are positive, simplify $(4x^5y^2)/9x^3$

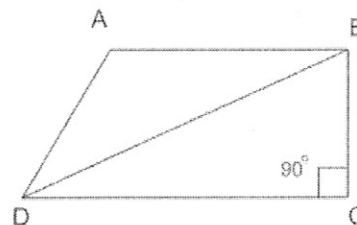   A) $4x^2y^2$ B) $\frac{4x^2y^2}{9}$ C) $\frac{4y^2}{9x^2}$ D) $\frac{4}{9}$

12. If 15% of x is 45,what is 20% of x?

    A) 55   B) 60   C) 66   D) 75

13. In the figure below, quadrilateral ABCD has AB parallel with CD, BC=3 and AB=4.

    What is the area of triangle ABD?

    A) 3   B) 4   C) 6   D) 7

14. A school has 500 students and 30 English teachers and 20 math teachers.
    What is the ratio between the number of math teachers and the number of students of the school?
    A) 25   B) $\frac{3}{50}$ C) $\frac{2}{3}$ D) $\frac{2}{50}$

15. Which sequence represents the table below:

n	1	2	3	4	5
value	1	4	7	10	13

   A) n + 1   B) 2n − 1   C) 3n − 2   D) n

16. How many feet are in 10 yards?
    A) 25   B) 30   C) 36   D) 40

17. What is the range of the following set of data: 12, -2, 9, 3, 2.4, 7.1, 11?
    A) 12   B) 14   C) 12.4   D) 14.4

18. John starts a saving account with $100. Every week he adds $6 to his account. Which equation can be used to determine the number of weeks w, after which John's accounts reaches $220?
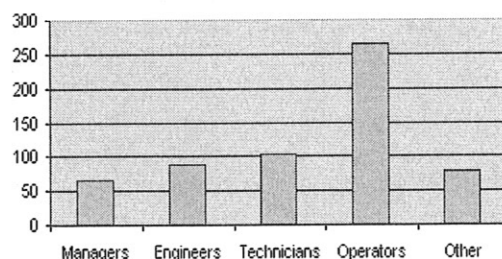   A) 6w + 100 = 220   C) 6w - 100 = 220
    B) 6w + 220 = 100   D) 6 + w = 220

19. If a, b and c are odd integers, which of the following expressions must be an even integer?
    A) a + b + c   B) a(b + c)   C) ab + bc + ca   D) a(b + c - 1)

20. What is the approximate percentage of all employees of Company A that are operators?
   A) 12%
    B) 29%
    C) 33%
    D) 44%

21. Mike bought 5 shirts and 4 ties. The cost of a tie is $9 and the cost of a shirt is $15.
    Which equation can be used to find the total cost of the 5 shirts and 4 ties, p?
    A) $p = 5 \cdot 15 + 4 \cdot 9$ C) $p = 5 \cdot 9 + 4 \cdot 15$
    B) $p = 5 \cdot 4 + 9 \cdot 15$ D) $p = 5 \cdot 5 + 4 \cdot 4$

22. The two circles in the figure below intersect each other in M and N. Both circles have radii of 4 inches. AB = 3 inches where A and B are the points of intersection of segment O_1 and O_2 with the two circles. What is the length O_1O_2?
    A) 2 inches
    B) 3 inches
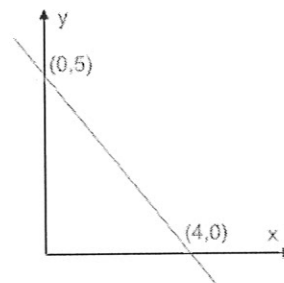   C) 4 inches
    D) 5 inches
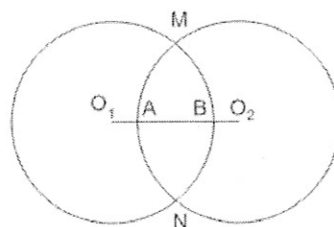
23. $10^2 - (3^3 - 4^2)^2 =$

 A) 75   B) -21   C) 16   D) -28

24. Which equation best represents the line graph to the right?

 A) $y = \frac{5}{4}x + 5$ C) $y = -\frac{4}{5}x + 5$

 B) $y = -\frac{5}{4}x + 5$ D) $y = \frac{4}{5}x + 5$

(0,5)

(4,0)   x
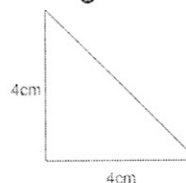
25. What is the least common multiple of 15, 9 and 6?

 A) 60   B) 90   C) 45   D) 30

26. Which of the following is the closest to the perimeter of the right triangle in the figure below?

 A) 11.6 cm   C) 12.8cm

 B) 13.1 cm   D) 13.6 cm

4cm

4cm

27. A cylindrical container with a radius of 2 feet has a height of 3 feet.
    Which of the following is the closest to the volume of the container:

 A) 37.68 cubic feet   B) 38.8 cubic feet   C) 39.65 cubic feet   D) 40.12 cubic feet

28. A rectangular prism of volume V, height h and width w has a length of:

 A) Vhw B) $\frac{V}{hw}$ C) $\frac{hw}{V}$ D) $\frac{Vh}{w}$

29. The area of a sector of circle C is one sixth of the area of the circle.
    What is the radius of the circle if the area of the sector is 6π ?

 A) 6.0   B) 6.1   C) 6.2   D) 6.3

30. Let x = 3 and y = 4. Calculate the expression $(x - 1)^2 + 5(x - y)$.

 A) -1   B) 0   C) 1   D) 2