## Algebra II EOC Practice Exam

Student Name: $\qquad$ Date: $\qquad$
Teacher Name: Julia Kaplan
Score: $\qquad$

1) Which algebraic equation best represents Jarrett's hair growth rate?

David's hair grows at a rate four times as fast as Jarrett's.
A) $D=\frac{1}{4}$
B) $D=\frac{4}{J}$
C) $\quad \mathrm{J}=\mathrm{D} \cdot 4$
D) $\quad J=\frac{1}{4} \cdot D$
2)

Gas Price Analysis by Grade

|  | Regular | Mid | Premium |
| :---: | :---: | :---: | :---: |
| $10 / 15 / 04$ | $\$ 1.892$ | $\$ 2.003$ | $\$ 2.099$ |
| $10 / 10 / 04$ | $\$ 1.883$ | $\$ 1.993$ | $\$ 2.089$ |
| $9 / 10 / 04$ | $\$ 1.462$ | $\$ 1.874$ | $\$ 1.963$ |
| $10 / 15 / 03$ | $\$ 1.462$ | $\$ 1.547$ | $\$ 1.622$ |

For all three grades of gasoline, what happened to gas prices from 10/10/04 to 10/15/04?
A) increased
C) remained the same
B) decreased
D) some increased and some decreased
3)


Cube $A$ has a side length of 3 meters and cube $B$ has a side length of 6 meters. Calculate the volume of the two cubes. Which statement accurately represents the relationship between the two volumes?
A) The volume of cube $A$ is half the
volume of cube $B$.
C) The volume of cube B is 6 times the volume of cube A.
B)
The volume of cube $B$ is 4 times the volume of cube $A$.
D) The volume of cube B is 8 times the volume of cube A.
4) Which expression represents the number of feet that are in $x$ yards?
A) $12 x$
B) $36 x$
C) $3 x$
D) $\frac{x}{3}$
5) Simplify the expression.

$$
\left(3 x^{\frac{3}{4}}\right)\left(8 x^{\frac{1}{2}}\right)
$$

A) $24 x^{\frac{5}{4}}$
B) $24 x^{\frac{3}{8}}$
C) $11 x^{\frac{2}{3}}$
D) $11 x^{\frac{1}{4}}$
6) Multiply $(x+5)(x-6)$.
A) $x^{2}-x-30$
B) $x^{2}+x-30$
C) $x^{2}-11 x-30$
D) $x^{2}+11 x-30$
7) If $f(x)=x^{2}+2 x-6$ and $g(x)=3 x^{2}-5 x-7$, find $f(x)-g(x)$.
A) $-2 x^{2}-3 x+1$
B) $-2 x^{2}+7 x+1$
C) $-2 x^{2}-3 x-13$
D) $4 x^{2}-3 x-13$
8) Identify the linear function graph.
A)

D)

9) A baseball is thrown up in the air from a height of 3 feet with an initial velocity of 23 feet per second. What is the maximum height of the baseball and when does it reach this height?
[Use the equation $\mathrm{h}=-16 \mathrm{t}^{2}+\mathrm{v}_{0} \mathrm{t}+\mathrm{h}_{0}$.]

The maximum height is 11.3 feet and
A) it reaches this height at 0.72 seconds

The maximum height is 135.25 feet and it reaches
C) this height at 11.50 seconds
B) The maximum height is 2.35 feet and it reaches this height at 29.98 seconds
D) The maximum height is 11.50 feet and it reaches this height at 135.25 seconds.
10) A caterer charges $\$ 500$ plus $\$ 30$ per guest to cater a wedding. Walt and Traci don't want to spend more than $\$ 8000$ on catering. Write and solve an inequality in terms of the number of guests, $g$, that can be invited.
A) $30 \mathrm{~g} \leqq 8000 ; g \leqq 267$
B) $500 \mathrm{~g}<8000 ; g<16$
C) $530 \mathrm{~g}<8000 ; g<16$
D) $500+30 \mathrm{~g} \leqq 8000 ; g \leqq 250$
11) How do you find the point of intersection(s) for $x=2 y^{2}+3 y+1$ and $2 x+3 y^{2}=0$

Solve both equations for x and set them equal to each other. This will give you the $y$-coordinates of
A)

You cannot find points of intersections for non-functions.

Plug in 0 for x into both equations and solve for y . Then plug that answer back
B) into the other equation to find the corresponding x -coordinate.
C) the points of intersection. Then plug back into one of the equations to find the corresponding $x$ coordinates. Solve both equations for $y$ and set them equal to each other. This will give you the x-coordinates of
D) the points of intersection. Then plug back into one of the equations to find the corresponding $y$ coordinates.
12) Simplify.

## $10^{2} \cdot 10^{4}$

A) $10^{-2}$
B) $10^{2}$
C) $10^{6}$
D) $10^{8}$
13) Eric sells shirts. It costs him $\$ 100$ to buy all the shirts and $\$ 10$ to print designs on the shirts. Eric sells each shirt for $\$ 4$. So far Eric has sold 20 shirts. Eric uses an equation to calculate his total profit. Write an equation for this situation and determine the slope.
A) 4
B) 10
C) 20
D) 40
14) Which situation describes INDEPENDENT events?
A) A die is rolled, then it is rolled a second time.

One card is chosen from a standard
B) deck, it is set aside, then a second card is drawn.
C) Tom chooses a letter of the alphabet, then Beth

One student is chosen from Classroom A, then
D) that student chooses one of his friends from Classroom A.
15) Solve the equation.

$$
6^{x}=12
$$

A) 0.693
B) 0.721
C) 1.387
D) 2
16) What ratio represents the probability of drawing a red card from a standard deck of 52 cards?
A) $1: 52$
B) $1: 8$
C) $1: 4$
D) $1: 2$
17) Heather's school is switching from block scheduling to a more traditional schedule. She is trying to determine how the parents and students feel about this. Which question is the MOST appropriate for her to ask?
A) How do you feel about switching to a schedule that allows fewer electives?
C) Wouldn't it be better to stay on block then to
What do you think of the new
How do you feel about your child being on a
B) traditional schedule the school is switching to?
D) traditional schedule which allows for more homework from more classes?
18) Just Peachy Orchard produced 1100 bushels of peaches last year. This year the owner earned $\$ 8800$ from sales. He's thinking that the number of bushels produced will increase by a growth factor of 1.1 each year and his sales will increase by a factor of 1.111 each year. If $B(t)=1100(1.1)^{t}$ represents the number of bushels produced $t$ years from now and $S(t)=8800(1.111)^{t}$ represents the owner's income $t$ years from now, which function, as defined by $P(t)$, represents the price for one bushel of peaches $t$ years from now?
A) $\quad \mathrm{P}(\mathrm{t})=8(1.01)^{\mathrm{t}}$
B) $\quad \mathrm{P}(\mathrm{t})=8(1.11)^{\mathrm{t}}$
C) $P(t)=8800(1.01)^{t}$
D) $\quad \mathrm{P}(\mathrm{t})=1100(1.01)^{\mathrm{t}}$
19) Find f(5).

$$
f(x)=x^{2}+2 x
$$

A) 15
B) 20
C) 30
D) 35
20) Jack is running for city mayor. He stops the first 10 people on the street and asks them what their biggest concern for the city is. Six of the people say higher taxes are their biggest concern. Jack concludes that most people in the town think higher taxes are the biggest concern. Jack's conclusion is
A) valid. Jack asked enough people.
B) invalid. Jack did not ask enough people.
C) incorrect. Six of ten people is not a majority.
D) bias. Jack does not want to raise taxes and is looking for support.
21) Simplify.

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

A) $\quad 2^{-1}$
B) $2^{2}$
C) $\quad 2^{10}$
D) $8^{2}$
22)


Which system of inequalities is shown in the graph?
A) $2 x+3 y \leq 5$ and $-3 x+2 y<6$
B) $2 x+3 y<5$ and $-3 x+2 y \leq 6$
C) $2 x+3 y \geq 5$ and $-3 x+2 y>6$
D) $2 x+3 y>5$ and $-3 x+2 y \geq 6$
23)


Which equation is modeled by the graph? What is the estimated change in the number of cars in the parking garage for each minute after 8 a.m.?
A) $y=3 x+50 ; 3$ cars per minute
B) $y=4 x+50 ; 4$ cars per minute
C) $y=3 x-50 ; 3$ cars per minute
D) $y=-3 x+50 ;-3$ cars per minute
24) Find the solution set for the equation $\sqrt[3]{(x-2)^{2}}=5$.
A) $\{7\}$
B) $\quad\{27\}$
C) $\{2 \pm 5 \sqrt{5}\}$
D) $\{7 \pm 2 \sqrt[3]{5}\}$
25) Which statement about normally distributed data is TRUE?
A) It typically has no mode.
C) It is usually qualitative.
B) It often arises in nature.
D) It is very hard to predict.
26)


What are the $x$-intercepts of the quadratic?
A) $(0,0)$
C) $(-1,0)$
B) $(0,-1)$
D) There are none.
27) Simplify.
$\frac{16 b^{2}+8 b}{5 b-b}$
A) $4 b+1$
B) $4 b+2$
C) $5 b+1$
D) $5 b+2$
28) Mr. Hauseman has 17 students in his class, three of whom are freshmen, and the rest are from other classes. He is going to draw two students randomly to be partners.

He calculates the probability of drawing a freshman and then a junior to be $\frac{9}{136}$. How many juniors must be in the class?
A) 3
B) 6
C) 7
D) 8
29) Simplify the expression:
$\frac{x^{2}-x-6}{x^{2}-9}$
A) $\frac{-x-2}{-3}$
B) $\frac{-x-6}{-9}$
C) $\frac{x+2}{x+3}$
D) $\frac{x-2}{x-3}$
30)

$$
\begin{aligned}
& f(x)=x^{2}-2 x+3 \\
& g(x)=x^{3}-x^{2}+4 x \\
& \hline
\end{aligned}
$$

Find $f(x)+g(x)$.
A) $x^{3}+2 x+3$
B) $x^{5}-3 x^{2}+7 x$
C) $x^{3}+x^{2}+2 x+3$
D) $2 x^{3}-2 x+6 x+3$
31) Solve the system.
$-3 x+4 y=-22$
$2 x+7 y=5$
A) $(6,-1)$
B) $(-1,6)$
C) $(-1,-6)$
D) $(-6,-1)$
32) Convert $\frac{13 \pi}{10}$ to degrees.
A) $117^{\circ}$
B) $234^{\circ}$
C) $351^{\circ}$
D) $468^{\circ}$
33) The equation $y=-\frac{5}{6}(x+6)^{2}-3$ represents which conic section?
A) circle
C) hyperbola
B) ellipse
D) parabola
34)


In a normal distribution, what percent of the data lies within three standard deviations of the mean?
A) $0.1 \%$
B) $49.8 \%$
C) $95 \%$
D) $\quad 99.7 \%$
35)

Blue die

$$
\begin{array}{cc} 
& \\
& 1 \\
\text { Red die } & 2 \\
& 3 \\
& 4 \\
& 5 \\
& 6
\end{array}\left[\begin{array}{cccccc}
1 & 2 & 3 & 4 & 5 & 6 \\
1 & 0 & 2 & 2 & 0 & 1 \\
2 & 1 & 0 & 2 & 0 & 2 \\
1 & 2 & 3 & 2 & 1 & 1 \\
0 & 1 & 2 & 2 & 3 & 1 \\
2 & 0 & 1 & 1 & 2 & 0 \\
1 & 3 & 1 & 1 & 0 & 2
\end{array}\right]
$$

The matrix displays the outcomes when two dice, one red and one blue, were rolled 46 times. According to the data shown, how many times did the dice display an ODD total?
A) 18
B) 23
C) 25
D) 31
36) Simplify.

$$
\frac{a^{7}}{a^{3}}
$$

A) $a^{4}$
B) $a^{8}$
C) $a^{10}$
D) $a^{21}$
37)


If a point is randomly chosen on the regular hexagon shown, what is the probability that it will be in a blue section of the figure?
A) $\frac{1}{6}$
B) $\frac{1}{3}$
C) $\frac{1}{2}$
D) $\frac{3}{4}$
38) Simplify.

$$
\left(3 x^{2}+3\right)-(6 x+4)+\left(3 x^{2}-5 x\right)
$$

A) $-11 x-1$
B) $6 x^{2}+x+7$
C) $6 x^{2}-11 x-1$
D) $6 x^{2}-11 x+7$
39) Raul bought a soft drink and a sandwich for $\$ 9.90$. What is the price of each if the sandwich cost 3.5 times as much as the soft drink?
A) Sandwich costs \$5.94 and the soda costs $\$ 3.96$
C) Sandwich costs $\$ 5.40$ and the soda costs $\$ 4.50$
B) $\begin{aligned} & \text { Sandwich costs } \$ 7.70 \text { and the soda } \\ & \text { costs } \$ 2.20\end{aligned}$
D) Sandwich costs $\$ 2.83$ and the soda costs $\$ 9.90$
40) In the inequality $3 x+14 \leq 44$, $x$ represents the cost of CDs Tim bought. Which phrase most accurately describes the cost of CDs?
A) the cost of the CDs is at most $\$ 10$
C) the cost of the CDs is less than $\$ 10$
B) the cost of the CDs is at least $\$ 10$
D) the cost of the CDs is more than $\$ 10$
41) Simplify.

$$
(2 x) \frac{x^{5}}{x^{2}}
$$

A) $2 x^{4}$
B) $2 x^{3}$
C) $\frac{2}{x^{2}}$
D) $\frac{2}{x^{4}}$
42) Find the inverse of $f(x)=\frac{x-5}{x+6} ; x \neq-6$.
A) $f^{-1}(x)=\frac{x+5}{x-6}$
B) $\quad f^{-1}(x)=\frac{x+6}{x-5}$
C) $f^{-1}(x)=\frac{6 x+5}{x+1}$
D) $f^{-1}(x)=-\frac{6 x-5}{x-1}$
43) Is $x-3$ a factor of the polynomial $p(x)=2 x^{4}-9 x^{3}+15 x^{2}-22 x+12$, and for what reason?
A) Yes, because $p(3)$ is equal to 0 .
C) No , because $p(3)$ is not equal to 0 .
B) Yes, because $p(-3)$ is equal to 0 .
D) No, because $p(-3)$ is not equal to 0 .
44)


Which sentence best describes the function shown?
A) The function is odd.
C) The function is symmetric about the $x$-axis.
B) The function is even.
D) The function is symmetric about the origin.
45) As a fundraiser, the band is selling cookies. The cost to make each cookie can be written as $c(x)=0.25 x+0.5$ and the functions that represents the amount they sell the cookie for can be written as $s(x)=2 x$. What function represents the profit, $P(x)$, for each function?
A) $\quad P(x)=0.5 x+1$
B) $P(x)=0.5 x^{2}+x$
C) $\quad P(x)=2.25 x+0.5$
D) $\quad P(x)=1.75 x-0.5$
46) You are rolling a die and you have rolled for the last 10 times an even number. What is the probability that you will roll another even number?
A) $\frac{1}{2}$
B) $\frac{1}{4}$
C) $\frac{1}{6}$
D) $\frac{2}{6}$
47)

## Growth of money

| Month | Money |
| :---: | :---: |
| 1 | $\$ 500$ |
| 2 | $\$ 525$ |
| 3 | $\$ 551.25$ |
| 4 | $\$ 578.81$ |

The table shows the relationship between the amount of money in a bank account at the end of each month. Determine whether it's a growth or decay and whether it grows or decays by a constant percent.
A) decays by percent that varies
C) grows by percent that varies
B) decays by a constant percent
D) grows by a constant percent
48) Daniel's basic cell phone rate each month is $\$ 29.95$. Add to that $\$ 5.95$ for voice mail and $\$ 2.95$ for text messaging. This past month Daniel spent an additional C dollars on long distance. His total bill was $\$ 62.35$. How much did Daniel spend on long distance?
A) $\$ 23.50$
B) $\$ 24.00$
C) $\$ 62.35$
D) $\$ 63.00$
49) Mindy used the equation $3 m^{2}+2=50$ to determine how many months ( $m$ ) it would take her to finish a project. According to Mindy's equation, how long will it take her to finish the project?
A) 3 months
B) 4 months
C) 5 months
D) 6 months
50) Michelle draws a card from a standard deck of 52 cards. She replaces the card and draws a second card. What is the probability that she draws a red card and then a black card?
A) $\frac{1}{16}$
B) $\frac{1}{26}$
C) $\frac{1}{4}$
D) $\frac{1}{52}$
51)

| Study 1 | A student studied the effect of temperature on the activity of an enzyme. The student set the <br> temperature to different values while keeping other variables fixed and measured the enzyme <br> activity at each temperature. |
| :--- | :--- |
| Study 2 | Researchers studied the effect of temperature on the amount of water intake. 460 participants <br> were randomly assigned to five groups and seated in controlled environments with temperatures <br> of $60,70,80$, and 85 degrees. Their consumption of water was monitored during a four-hour <br> period. |

Two studies which involve temperature as an independent variable are described in the table.
Which statement correctly classifies the two studies?
A)
Both studies were experimental studies.
C) Either study could be considered as observational.
Both studies were observational studies.
Study 1 was an experimental study and Study 2
was an observational study.
52) Choose the situation which would best be modeled by an exponential decay function.
A) An island is being eroded away and loses $10 \%$ of its beachfront every year.

A player's batting average decreases by
B) .025 for each year he is in the major leagues.

A bank account has fallen below a minimum
C) balance and is being charged $\$ 1.50$ per day in fees.

A machine depreciates (loses value) by $\$ 1000$ in
D) its first year, by $\$ 2000$ in its second, $\$ 3000$ in its third, etc.
53)

The life span of fluorescent lamps manufactured by a production unit is normally distributed. The mean life span is 10,502 hours and the standard deviation is 415 hours.

If 66,500 lamps are manufactured, how many of those lamps last at least 9,850 hours?
A) 39,900
B) 46,600
C) 59,900
D) 62,600
54) A city had population 67,255 on January 1, 2000, and its population has been increasing by 2935 people each year since then. A linear model for the population P , where $t$ is in years after 2000, is
A) $P(t)=2935 t$.
B) $\mathrm{P}(\mathrm{t})=67255 \mathrm{t}$.
C) $P(t)=2935+67255 t$.
D) $P(t)=67255+2935 t$.
55) For today's lunch, a school cafeteria's budget allows it to purchase at most 60 cans of beans and 45 cans of corn. 1 can of beans feeds 5 students, and 1 can of corn feeds 6 students. Each student will have beans or corn, but not both, and there will be a maximum of 420 students at lunch. If a can of beans cost $\$ 2.00$ and a can of corn cost $\$ 3.00$, what is the maximum amount of money required to feed all of the students either beans or corn?
A) $\$ 180$
B) $\$ 195$
C) $\$ 210$
D) $\$ 225$
56)


Find the vertical asymptote(s) of the function, if possible.

$$
g(x)=\frac{3 x-2}{x^{2}+3 x-10}
$$

A) $x=3$
B) $x=\frac{2}{3}$
C) $x=-\frac{10}{3}$
D) $x=-5$ and 2

## 57)

A population, $P$, of birds is doubling in size each year, according to the model $P=100\left(2^{t}\right)$, where $t$ reperesents years. What was the initial population size?
A) exponential growth.
B) exponential decay.
C) logistic growth.
D) logistic decay.
58) Simplify and rewrite so the expression contains no radicals.

$$
\sqrt{\frac{5 \cdot 7^{2}}{35}}
$$

A) 7
B) $7^{\frac{1}{2}}$
C) $\frac{1}{7}$
D) $\frac{1}{7^{2}}$
59) What is 16 in exponential form?
A) $4 \times 4$
B) $8 \times 2$
C) $2^{3}$
D) $\quad 2^{4}$
60) The quadratic equation $x=-\frac{7}{11} y^{2}$ was changed to $x=-\frac{7}{11} y^{2}-3$. What was the effect on the graph of the equation?
A) The graph shifted 3 units up.
C) The graph shifted 3 units to the left.
B) The graph shifted 3 units down.
D) The graph shifted 3 units to the right.
61) Solve the system of equations using elimination.
$4 x-7 y=5$
$9 x-7 y=-15$
A) $(3,4)$
B) $(4,3)$
C) $(-4,-3)$
D) $(-3,-4)$

## Sacramento Valley Transportation

By: Sacramento History Online
1 In the traditions of Sacramento Valley Native Americans, mysterious figures were transported over water in a raft to create the world. One dove from the raft into the water and came up with dirt. From that soil the world was formed.

2 The transportation by a raft is symbolic of the role of transportation in the evolution of local history. Paleo-Indians arrived about 12,000 years ago. The rich natural resources made the Sacramento Valley a "Garden of Eden." Permanent villages were established about 8,000 years ago. Native Americans walked and traveled the rivers and waterways with rafts. The later arriving Spanish entered the Valley by horse, British and American trappers entered by horse and on foot. Settlers from the Midwest and east coast arrived in wagon trains. Gold seekers walked over land along side wagons or by sea on sailing ships and
later steamboats. By the late 1840's dreams of a transcontinental railroad were debated. In 1849 the "friends of a Rail Road to California" met in Boston to hear a proposal for a railroad from St. Louis to San Francisco. But the shorter transcontinental crossing at the Isthmus of Panama by a railroad would occur first in 1855. Meanwhile, the connection between San Francisco and Sacramento was improved by an expanding, fast, and efficient steamboat service. In 1856 the Sacramento Valley Railroad opened officially for service between Sacramento and Folsom.

3 Just as transportation improved travel, it also accelerated the economic development of California. In 1849, California gold fields were referred to as the "Extremity of Civilization" and in the next decade because of transportation, California began to impact the economy of the United States and eventually the world.

4 Passengers were moved by stagecoach. By 1854, many of the stage operators were merged by James Birch into the California Stage Company. Birch's stage line controlled eighty percent of the stagecoach traffic over 3,000 miles of routes connecting the western portion of the United States. In 1856, Birch lobbied Congress to establish a national wagon road. He presented Congress with a petition from Northern California with 75,000 signatures. As one of the largest petitions yet received by Congress, they responded by establishing three wagon roads to the Pacific Coast and appropriating $\$ 600,000$ for a twiceweekly overland mail service from St. Louis to San Francisco.

5 The Sacramento region used great power in the decade of the 1850s, in spite of its small resident population, when compared to San Francisco. The largest portion of the state's population lived in the "Sacramento District." Sacramento representatives strongly influenced the State's Constitutional Convention, landed the permanent State Capitol, and elected the State's first governor. Sacramento's influence was in large part due to its growth in commerce, particularly that portion related to transportation such as railroads and steamboats, as well as wholesale merchants who supplied retailers throughout California and Nevada. Those large-scale merchants of Sacramento saw their success tied to better wagon roads and railroads.
${ }^{6}$ Great wealth was to be gained by a wagon toll road over the Sierra Nevada Mountains to Virginia City and even greater fortunes in a transcontinental railroad. The railroad would offer enormous opportunities for California and the Sacramento region to grow. The potential bounty of Sacramento Valley agriculture was to be realized with faster and more efficient transportation. Sacramento merchants would organize and build the western half of that railroad.

7 In the 1890s the first commercial automobiles began to arrive in Sacramento. By 1905, twenty-seven automobiles were registered in Sacramento County. By 1910, seven hundred more were registered, and by July 1911, in what can only be called "Auto Frenzy," Sacramentans were buying seventy-five autos per day. Automobiles alone could not make a significant difference. A network of paved roads was essential. Three bridges had to cross the American River between Sacramento and Fair Oaks. Perhaps the best symbol of this growing network would be the completion of the Yolo Causeway in 1916.
${ }^{8}$ For the Sacramento Valley, airplanes and other airships including balloons were a novelty until 1917. With the nation gearing up for W.W.I, the Government awarded a $\$ 3,000,000$ contract to build "IN-4" (Jenny) bi-wing military airplanes in North Sacramento. For the rest of that Century, Sacramento would look to aviation as a vital source of economic sustenance.
${ }^{9}$ As urban areas developed, streetcar systems evolved, first pulled by horses and later using electricity. For those in urban areas, it was the first experience at the freedom of cheap efficient public transportation. Urban transportation led to interurban systems that would ultimately evolve into an electric passenger railroad system, linking the Bay area with Sacramento and smaller Valley communities
all the way to Chico.
10 The development of the Sacramento region is so intertwined with transportation that the region's history would be incomplete without serious attention given to the impact of wagon trains, steamboats, railroads, and automobiles.

## 62) Passengers were moved by stagecoach.

Which sentence would be the BEST replacement for this sentence from paragraph four?
A)

Passengers were not accustomed to
ride with animals. ride with animals.
B)

Stagecoaches were not the only thing to move passengers.
C) Passengers were moved by wagons as well, just not as quickly.
While wagons were used for mining and
D) agriculture, stagecoaches were used to move individual passengers.

## The Care and Keeping of Big Cats Part B

By: Kate McConnaughey
$1(10)$ One function of zoos being to provide safe places where endangered animals can breed. To be effective in producing healthy cats that are genetically diverse (born to unrelated parents), zoos will often ship animals long distances to find mates that would make a good match. ${ }^{(11)}$ If you let closely related cats have offspring together, their young would be considered inbred, which means they don't have a healthy mix of different backgrounds in their physical makeup. Inbred animals are prone to be sick or even die. Computer technology helps zoos be sure which animals would make the best mates for each other and avoid inbreeding.
$2(12)$ Animals use in a Species Survival Plan are sometimes taken out of the public viewing areas for a private, less stressful, area to breed and care for their offspring in the first critical weeks. Usually you can tell if animals on display in a zoo are involved in an SSP because there will be a sign posted on their enclosure.

3 One of the most important differences in zoos today from zoos long ago is that they are more than just living museums. ${ }^{(13)}$ They are also in the battle valuable partners to save endangered species.

4 Food has to be wholesome and free from disease and parasites. ${ }^{(14)}$ It may be meat, a prepared diet such as ZuPreem or Mazuri, but a combination of both. Food is served raw to prevent nutrient loss from cooking. Additives make up for the loss of calcium and micronutrients available in regular prey. ${ }^{(15)}$ First, as part of good animal husbandry, food is individually prepared for each animal based on weight control and medication needs.
${ }^{5}$ Like all other animals in captivity, zoo animals require occasional trips to the vet. The veterinarians that handle zoo animals are specially trained in exotic medicine, the diseases and conditions of animals not usually kept as pets. ${ }^{(16)}$ Veterinary care usually is done at the zoo in a special health care building. That has the special equipment needed to fill cavities in a tiger's teeth or perform surgery on a lion.

6(17) When, for one reason or another, the parents of young big cats cannot raise their own offspring, the cubs and kittens are sent to a nursery where specially trained zoo staff and volunteers provide them with the food, stimulation, and affection. Young cats of all species cannot properly pass solid wastes on their own. A warm, wet washrag or sponge is used to wipe the backside of kittens and cubs to stimulate them to pass wastes, something they usually do in the wild when their mother cleans them with her tongue.
${ }^{(18)}$ Proper nursing is especially important, yet cubs and kittens are never given milk while they are lying on their back. This can cause pneumonia. ${ }^{(19)}$ The milk given to cats is different than the milk given to human children in a number of ways. Zoo personnel know the right way to mix milk for the different species of large and small cats in their care. ${ }^{(20)}$ Temperature is carefully controlled since these young animals are not as good at controlling their body temperature as are adults.
63) Look at the underlined section marked (13). Choose the answer that best corrects this sentence, if appropriate.

They are also valuable partners in the battle to save endangered species.
B) They are also, valuable partners, in the battle to save endangered species.
C)

They are in the battle also valuable partners to save endangered species.
D) Correct as is.

## The Peachtree Road Race: A Race Like No Other

By: David Matherne

${ }^{1}$ A common golfer cannot play in the Masters or British Open with the world's best-known golfers, nor can the average tennis player play against the world's best at Wimbledon. No teenager just learning to drive can bank the turns with professional drivers at the Daytona 500 . However, in the sport of road racing, common people and novice joggers can lace up and be in the same race as the world-class runners competing to win it all. The Peachtree Road Race in Atlanta, GA is the world's largest 10K, boasting 55,000 runners who line up for blocks at 7:30am to run down Atlanta's most famous street. Only a handful, however, really have a legitimate chance to win the prestigious crystal peach and the $\$ 15,000$ first place prize that comes with it. The Peachtree Road Race is unique as a road race in three distinctive ways: it is run on the 4th of July, it has a rich tradition, and it is the most competitive 10K in the world.

2 One thing that makes the Peachtree Road Race special is that it takes place each year on Independence Day. (1) American flags are waved down Peachtree Street, and nearly everywhere red, white, and blue is seen. Many runners choose to wear stars-and-stripes as a part of their racing outfit, but no one is allowed to wear costumes in this serious race. That means no Statues of Liberty are officially allowed running down the road, as with other large festive races such as the Bay-to-Breakers 12K in San Francisco. (2) Because the Peachtree is run on a holiday, most people have the day off. (3) They either run the race or cheer on the runners from either side of the street. There are tens of thousands of spectators all along the course.
${ }^{3}$ Not only is the race special because it takes place on a special day, but it also has a rich, over threedecade tradition. While the Boston Marathon can declare it is the oldest road race in America, few 10K's can claim they've been around longer than the Peachtree Road Race. (4) The race began modestly in 1970. (5) There were only 110 people in the race. By 1980, just ten years later, the race had grown from 110 runners to over 20,000 people and had nearly outgrown the four-lane street. One thing the Peachtree Road Race is known for is the colorful, artful t-shirts. (6) Given only to those who finish the challenging course, the $t$-shirt is a big reason why so many of the 55,000 run the race. Another long-standing tradition is the Fräbel-designed crystal peach to the top ten men instead of a trophy. Another fixture each year is the competitive wheelchair race that precedes the footrace and lures the fastest wheelchair racers in the world. The winners complete the race in about 18-19 minutes. Of course, the wheelchair competitors are not the only ones who compete at a world-class level.
${ }^{4}$ For its entire existence, the Peachtree Road Race has boasted Olympic-level victors. Olympic marathoner Jeff Galloway won the (7) opening race in 1970 when traffic was not even blocked off for the race, and runners had to run in the far right-hand lane. Other American Olympians like Frank Shorter, Don Kardong Craig Virgin, and Ed Eyestone each got his crystal peach. Despite not offering prize money for the first decade, (8) the race somehow got the best American runners the country had to offer. Yet, with the addition of prize money that rivaled any 10 K prize purse in the world, elite international runners
began toeing the line. Runners from Africa, Europe, and South America all began to make Peachtree a tradition of their own. Since the mid-80's, Kenyans have dominated the men's side, while the women's winners have come from all parts of the globe: New Zealand, Norway, Germany, South Africa, the U.S., and only recently Kenya.
${ }^{5}$ It is easy to see why the Peachtree Road Race has become a popular tradition for both the competitive world-class athlete and the weekend jogger alike. (9) A footrace down one of the most well-known streets in the South on the 4th of July is alone enough to make a runner want to become part of the tradition. Add to that mix--the amazing crowd cheering loudly for the entire race, the prestigious t-shirt, and the ability to run in the same race as those on running magazine covers--and you have the recipe for the world's best 10 K road race.
64) Which is the BEST way to revise the sentence labeled (9)?

A footrace may be a well-known
A) reason enough to get a runner to be a part of the tradition or running in the Peachtree.

A footrace in the South on the 4th, down a famous street, may be a reason to get a runner to be a part of the tradition alone.

A footrace alone may be enough of a reason for a
C) runner to want to run down one of the most wellknown streets on the 4th of July in the South.

A footrace down one of Atlanta's most famous streets on the Fourth of July might be enough to make a runner want to become part of the Peachtree tradition.

