Name: _____ **Class:** _____ **Date:** _____ **ID: A**

FINAL EXAM ALGEBRA 1 SEMESTER 2 CHAPTERS 6-10 REVIEW

Multiple Choice
Identify the choice that best completes the statement or answers the question.

_____ **1** Simplify $(-4)^0$.

A. 1
B. $-\frac{1}{4}$
C. –4
D. 0

_____ **2** Evaluate $a^0 b^{-2}$ for $a = 2$ and $b = -2$.

A. 0
B. $\frac{1}{4}$
C. $\frac{1}{2}$
D. –4

_____ **3** Simplify.
$\frac{a^{-7} b^0}{c^4}$

A. $\frac{1}{a^7 c^4}$
B. $\frac{a^{-7}}{c^4}$
C. $\frac{a^7 b}{c^4}$
D. $\frac{b}{a^7 c^4}$

_____ **4** Simplify $\frac{9x^0 y^{-8}}{z^{-8}}$.

A. $\frac{9y^8}{z^8}$
B. $\frac{9z^8}{y^8}$
C. $9xy^8 z^8$
D. $\frac{9}{y^8 z^8}$

_____ **5** Find the value of the power 10^7.

A. 1000000
B. 0.0000001
C. 70
D. 10000000

_____ **6** Simplify $(-6) \cdot (-6)^2$.

A. –18
B. Cannot simplify
C. –216
D. $-\frac{1}{216}$

_____ **7** Simplify $m^3 \cdot y^6 \cdot m^2$.

A. $m^5 \cdot y^6$
B. $(m \cdot y)^{11}$
C. $m \cdot y^6$
D. $m^6 \cdot y^6$

_____ **8** Simplify $(8^7)^3$.

A. 8^{10}
B. 8^{21}
C. 8^4
D. 56^3

_____ **9** Simplify $(x^3)^{-8}x^4$.

A. x^{-20}
B. $\frac{1}{x^{96}}$
C. $\frac{1}{x^{20}}$
D. $\frac{1}{x^{20}}$

_____ **10** Simplify $(4x)^3$.

A. $64x$
B. $4x^3$
C. $64x^3$
D. $-64x^3$

_____ **11** Simplify $(m^2n^{-3})^2(-m^{-3}n^3)^3$.

A. $-\frac{n^3}{m^5}$
B. $-\frac{1}{m^{36}n^{54}}$
C. $-m^4n^5$
D. $-\frac{n^{243}}{m^{108}}$

_____ **12** Simplify $\frac{6^3}{6}$.

A. 3
B. 36
C. 1,296
D. Cannot simplify

_____ **13** Simplify $\frac{y^6z^{12}}{(yz)^3}$.

A. y^6z^{12}
B. y^3z^9
C. Cannot simplify
D. y^6z^4

_____ **14** Simplify $(8.82 \times 10^5) \div (9 \times 10^2)$ and write the answer in scientific notation.

A. 9.8×10^7
B. 98
C. 9.8×10^2
D. 9.8×10^4

_____ **15** Simplify $\left(\frac{4}{3}\right)^3$.

A. $\frac{27}{64}$
B. $\frac{64}{27}$
C. $-\frac{16}{3}$
D. $-\frac{1}{3}$

_____ **16** Simplify $\left(\frac{2}{4}\right)^{-3}$.

A. $-\frac{3}{4}$
B. 8
C. $-\frac{16}{3}$
D. $\frac{1}{8}$

_____ **17** Simplify.
$\left(\frac{5a}{b^2}\right)^{-2}$

A. $\frac{b^4}{25a^2}$
B. $\frac{b^4}{5^2a^2}$
C. $\frac{a^2}{25b^4}$
D. $\frac{5a^{-2}}{b^2}$

_____ **18** Simplify the expression $64^{\frac{2}{3}}$.

A. 16
B. 4
C. 12
D. 20

_____ **19** Simplify. All variables represent nonnegative numbers.
$\left(a^2 b^{\frac{1}{2}}\right)^8 \sqrt[6]{b^6}$

A. $a^{16}b^5$
B. $a^{16}b^4$
C. $a^{10}b^{\frac{19}{2}}$
D. a^2b^5

_____ **20** Find the degree of the monomial $-5a^7b^4$.

A. 7
B. 11
C. –5
D. 4

_____ **21** Find the degree of the polynomial $3x^3y^6 + 5xy + x^3$.

A. 6
B. 12
C. 9
D. 14

_____ **22** A toy rocket is launched from a platform 34 feet above the ground at a speed of 90 feet per second. The height of the rocket in feet is given by the polynomial $-16t^2 + 90t + 34$, where t is the time in seconds. How high will the rocket be after 3 seconds?

A. 160 feet
B. 126 feet
C. 2608 feet
D. 256 feet

_____ **23** Add or subtract.
$-10m + 2m^4 - 13m - 20m^4$

A. $-23m - 18m^4$
B. $-23m^2 - 18m^8$
C. $3m + 22m^4$
D. $-41m^5$

_____ **24** Subtract.
$(8b^4 - b^3) - (b^4 + 4b^3 - 4)$

A. $7b^4 - 5b^3 + 4$
B. $7b^4 - 5b^3$
C. $8b^4 - 5b^3 - 4$
D. $8b^4 + 4b^3 - 4$

_____ **25** Multiply.
$(\frac{2}{3}p^4y^3)(y^4s^5)(6p^2s^3)$

A. $4p^6y^7s^8$
B. $6\frac{2}{3}p^6y^7s^8$
C. $6\frac{2}{3}p^8y^{12}s^{15}$
D. $4p^8y^{12}s^{15}$

_____ **26** Multiply.
$9x^4y^5\left(-5x^3y^3 - 3y^3\right)$

A. $9x^8y^9 + 9x^5y^9$
B. $-45x^{12}y^{15} - 27y^{15}$
C. $4x^7y^8 + 6x^4y^8$
D. $-45x^7y^8 - 27x^4y^8$

_____ **27** Multiply.
$(n-5)(n-1)$

A. $n(n-1)-5(n-1)$
B. n^2-5n+5
C. n^2-6n+5
D. n^2+5

_____ **28** Multiply.
$(6w+6z)^2$

A. $36w^2+36wz+36z^2$
B. $36w^2+36z^2$
C. $36w^2+72wz+36z^2$
D. $12w^2+12z^2$

_____ **29** Multiply.
$(p-8)^2$

A. $p^2-16p-64$
B. $p^2+16p+64$
C. $p^2-16p-8$
D. $p^2-16p+64$

_____ **30** Multiply.
$(r+7)(r-7)$

A. r^2-49
B. r^2+14
C. $r^2-7r+49$
D. $2r-14$

_____ **31** Find the prime factorization of 70.

A. $2\cdot5$
B. $2\cdot5\cdot7$
C. $2^2\cdot3$
D. $2^3\cdot5^2\cdot7^2$

_____ **32** Find the GCF of 48 and 72.

A. 72
B. 24
C. 48
D. 144

_____ **33** Find the GCF of $2m^5$ and $32m^4$.

A. $32m^4$
B. m^4
C. $2m$
D. $2m^4$

_____ **34** Factor the polynomial $12y^3 + 33y^2 - 6y$.

A. $3y(4y^2 + 11y - 2)$
B. Cannot be factored
C. $3(4y^3 + 11y^2 - 2y)$
D. $y(12y^2 + 33y - 6)$

_____ **35** Factor $5(x - 2) - 9x(x - 2)$.

A. $-45x(x - 2)$
B. $(x - 2)(9x - 5)$
C. $(5 - 9x)(x - 2)(x - 2)$
D. $(x - 2)(5 - 9x)$

_____ **36** Factor $15x^3 - 6x^2 - 25x + 10$ by grouping.

A. $(5x - 2)(3x^2 - 5)$
B. $(5x - 5)(3x^2 - 2)$
C. $(15x - 2)(x^2 - 5)$
D. $(x - 2)(15x^2 - 5)$

_____ **37** Factor $x^2 + 101x + 100$.

A. $(x + 101)(x + 100)$
B. $(x + 2)(x + 50)$
C. $(x + 5)(x + 20)$
D. $(x + 1)(x + 100)$

_____ **38** Factor the trinomial $a^2 + 14a + 48$.

A. $(a + 14)(a + 1)$
B. $(a + 1)(a + 48)$
C. $(a + 6)(a + 8)$
D. $(a - 8)(a - 6)$

_____ **39** Factor the trinomial $r^2 + r - 20$.

A. $(r - 4)(r + 5)$
B. $(r - 5)(r - 4)$
C. $(r + 1)(r - 20)$
D. $(r - 1)(r - 20)$

_____ **40** Factor $x^2 + 20x + 36$. Check that the original polynomial and the factored form have the same values for x = 0, 1, 2, 3, and 4.

A. $(x + 20)(x + 36)$
B. $(x + 10)(x + 10)$
C. $(x + 4)(x + 9)$
D. $(x + 2)(x + 18)$

_____ **41** Factor the trinomial $x^4 + 50x^2 + 625$.

A. $2(x^2 + 25)^2$
B. $(x^2 + 50)^2$
C. $(x + 25)^4$
D. $(x^2 + 25)^2$

_____ **42** Factor $3x^2 + 2x - 8$.

A. $(x - 2)(3x + 4)$
B. $(x + 2)(3x + 4)$
C. $(x - 2)(3x - 4)$
D. $(x + 2)(3x - 4)$

_____ **43** Factor $2x^2 + 7x + 6$.

A. $(x + 3)(2x + 2)$
B. $(x + 2)(2x - 3)$
C. $(x + 2)(x + 3)$
D. $(x + 2)(2x + 3)$

_____ **44** Factor the trinomial $42n^2 - n - 30$.

A. Cannot be factored
B. $(6n - 5)(7n + 6)$
C. $(6n + 6)(7n - 5)$
D. $(6n + 5)(7n - 6)$

_____ **45** Find all possible values of b such that $4x^2 + bx + 3$ can be factored.

A. 7, 8
B. 7, 8, 13
C. 7
D. 8, 13

_____ **46** Tell whether the polynomial $6y^2(y^2 + 6y + 9)$ is completely factored. If not, factor it.

A. Yes.
B. No; $6y^2(y + 3)(y - 3)$.
C. No; $6y^4 + 36y^3 + 54y^2$.
D. No; $6y^2(y + 3)^2$.

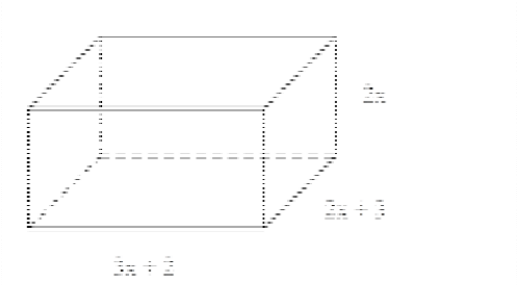
_____ **47** Factor $27x^2z + 36xz + 12z$ completely.

A. $z(3x + 12)^2$
B. $3z(3x + 2)^2$
C. $12z(2x^2 + 3x + 1)$
D. $3z(3x + 2)(3x - 2)$

_____ **48** Factor the polynomial $30x^3 + 22x^2 + 4x$ completely.

A. $2x(5x + 1)(3x + 2)$
B. $2x(5x + 2)(3x + 1)$
C. $(10x^2 + 4x)(3x + 1)$
D. $2(5x + 2)(3x + 1)$

_____ **49** Write a polynomial that represents the volume of the prism using x.

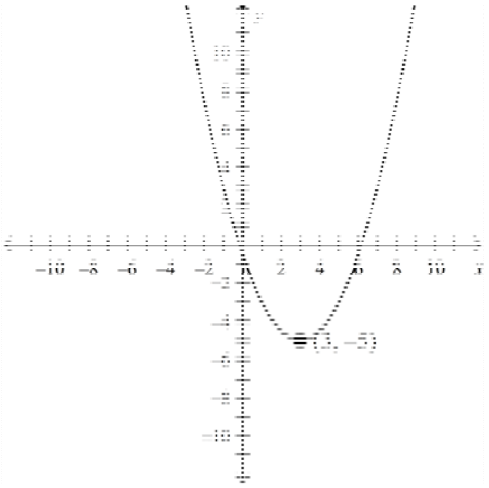


A. $7x + 5$
B. $12x^3 + 26x^2 + 12x$
C. $12x^2 + 26x + 12$
D. $12x^3 + 10x$

_____ **50** Tell whether the function $y + 2x^2 = -2$ is quadratic. Explain.

A. This is not a quadratic function because the x-term is missing.
B. This is a quadratic function because it can be written in standard form as $y = -2x^2 - 2$.
C. This is not a quadratic function because it is not written in standard form.
D. This is a quadratic function because it has an x^2 term.

_____ **51** Find the domain and range.



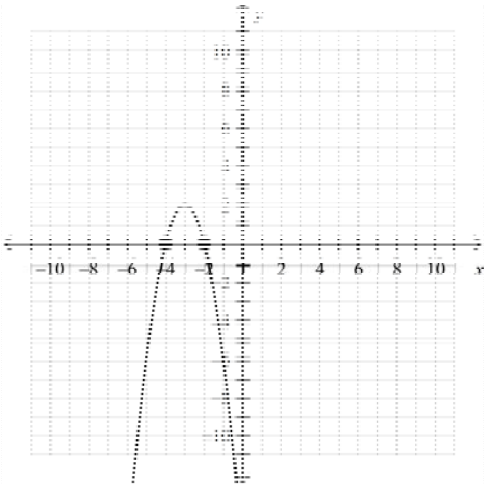
A. D: all real numbers
R: $y \geq 3$

B. D: $-10 \leq x \leq 10$
R: $y \geq -5$

C. D: all real numbers
R: $y \geq -5$

D. D: $x \geq -5$
R: all real numbers

_____ **52** Find the vertex of the parabola $y = -2x^2 - 12x - 16$.



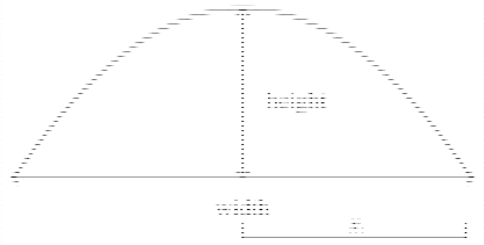
A. (–3, 2)

B. (2, –3)

C. (–2, 0) and (–4, 0)

D. (3, –70)

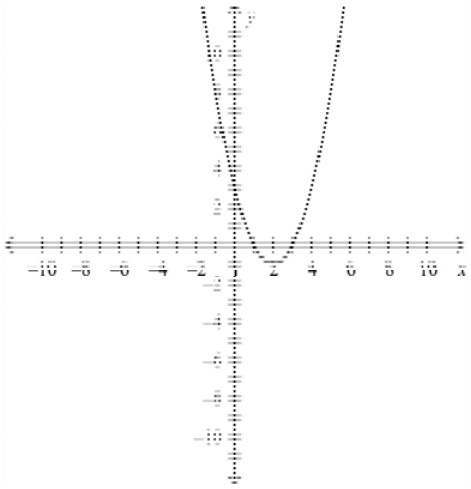
_____ **53** The height of a curved support beam can be modeled by $f(x) = -\frac{x^2}{300} + 12$. Find the height and width of the beam.



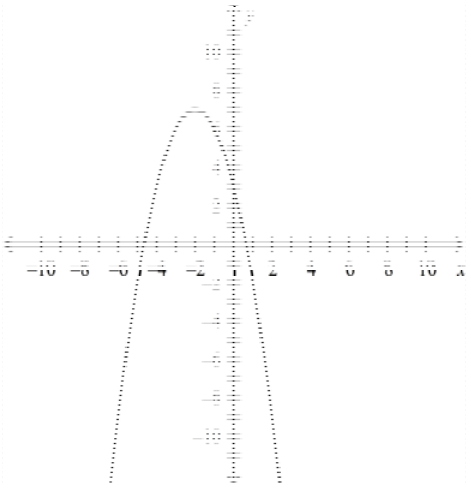
A. height = 25 units; width = 60 units
B. height = 12 units; width = 60 units
C. height = 25 units; width = 120 units
D. height = 12 units; width = 120 units

_____ **54** Graph $y = -x^2 - 4x - 3$.

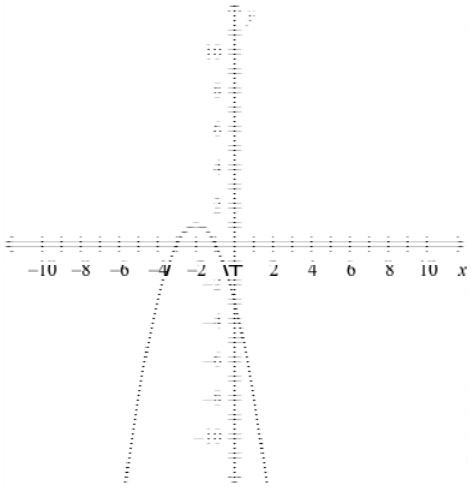
A.



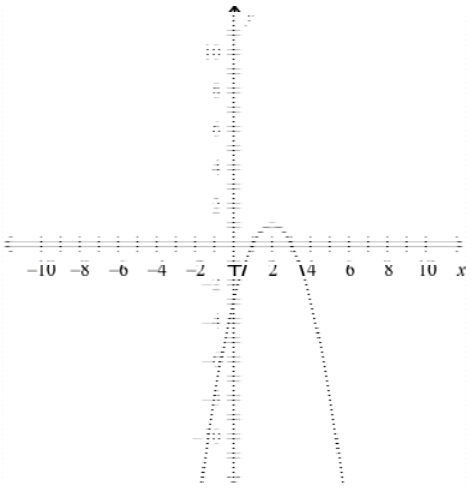
C.



B.



D.



_____ **55** Solve the equation $x^2 + 2x - 3 = 0$ by graphing the related function.

A. The solutions are 1 and –3.
B. The solutions are –1 and –4.
C. The solutions are 2 and –3.
D. The solutions are –1 and 3.

_____ **56** Solve the equation $-x^2 + 10x - 25 = 0$ by graphing the related function.

A. $y = 5$
B. $x = 5$
C. $x = 0$
D. $x = -5$

_____ **57** A kicker starts a football game by "kicking off". The quadratic function $y = -16x^2 + 60x$ models the football's height after x seconds. How long is the football in the air?

A. 1.94 sec
B. 6.63 sec
C. 15 sec
D. 3.75 sec

_____ **58** Use a graphing calculator to find approximate solutions of the equation $0 = -1.04x^2 + 5.2208x - 5.15268$.

A. (1.4, 2.5)
B. (4, 0)
C. (4, 0) and (1, 0)
D. (2.5, 1.4) and (1, 0)

_____ **59** Use the Zero Product Property to solve the equation $(x + 4)(x - 3) = -10$.

A. The solutions are –2 and 1.
B. The solutions are 4 and –3.
C. The solutions are –4 and 3.
D. The solutions are 2 and –1.

_____ **60** Solve the quadratic equation $x^2 + 2x - 8 = 0$ by factoring.

A. –4 and 2
B. 4 and 2
C. –4 and –2
D. 4 and –2

_____ **61** Solve the quadratic equation $12z^2 + 24z + 12 = 0$ by factoring.

A. $-\frac{1}{3}$
B. 1
C. –1
D. $\frac{1}{2}$

_____ **62** The height of an arrow that is shot upward at an initial velocity of 40 meters per second can be modeled by $h = 40t - 5t^2$, where h is the height in meters and t is the time in seconds. Find the time it takes for the arrow to reach the ground.

A. 6 sec
B. 4 sec
C. 8 sec
D. 2 sec

_____ **63** Solve $x^2 = -4$ by using square roots.

A. The solutions are 2 and –2.
B. The solution is 2.
C. There is no solution.
D. The solution is –2.

_____ **64** Solve $x^2 - 10 = 0$. If necessary, round to the nearest hundredth.

A. ±3.16
B. 100
C. ±20
D. There is no solution as you cannot take the square root of a negative number.

_____ **65** Solve $3x^2 - 6x + 1 = 0$. If necessary, round to the nearest hundredth.

A. $x \approx 1.82$ or $x \approx 0.18$
B. $x \approx 6.82$ or $x \approx 5.18$
C. There are no solutions.
D. $x \approx 10.90$ or $x \approx 1.10$

_____ **66** Complete the square for $x^2 - 14x +$? to form a perfect square trinomial.

A. $x^2 - 14x - 196$
B. $x^2 - 14x + 49$
C. $x^2 - 14x + 196$
D. $x^2 - 14x - 49$

_____ **67** Solve $r^2 - 4r = 12$ by completing the square.

A. 3 and –2
B. 6 and –2
C. 3 and 0
D. 6 and 3

_____ **68** Solve $2x^2 + 12x = -10$ by completing the square.

A. The solution is –5.
B. There is no solution.
C. The solutions are –1 and 5.
D. The solutions are –1 and –5.

_____ **69** Solve $3x^2 - 6x + 1 = 0$ by using the Quadratic Formula. If necessary, round to the nearest hundredth.

A. $x \approx 1.82$ or $x \approx 0.18$
B. $x \approx 6.82$ or $x \approx 5.18$
C. There are no solutions.
D. $x \approx 10.90$ or $x \approx 1.10$

_____ **70** Find the number of solutions of the equation $6x^2 + 4x + 4 = 0$ by using the discriminant.

A. There is one solution.
B. Cannot determine the number of solutions. The discriminant can only be used for a quadratic equation, and $6x^2 + 4x + 4 = 0$ is not a quadratic equation.
C. There are no real solutions.
D. There are two solutions.

_____ **71** Solve $c^2 + 10c + 16 = 0$.

A. $c = -8$ or $c = -2$
B. $c = 2$ or $c = 8$
C. $c = 1$ or $c = 16$
D. $c = 10$ or $c = 1$

____ **72** Simplify $\sqrt{\frac{z^{11}}{81z}}$. The variable represents a nonnegative number.

A. $\frac{\sqrt{z^{10}}}{9}$

B. $\frac{z^5}{9}$

C. $\frac{z^{10}}{81}$

D. $\sqrt{\frac{z^5}{9}}$

____ **73** Simplify $\sqrt{\frac{300}{49}}$.

A. $\frac{3\sqrt{10}}{7}$

B. $\frac{3}{7}$

C. $\frac{10\sqrt{3}}{7}$

D. $\frac{30}{7}$

____ **74** Subtract.
$3\sqrt{3} - 15\sqrt{3}$

A. $-12\sqrt{3}$

B. $18\sqrt{6}$

C. $18\sqrt{3}$

D. -12

____ **75** Find the perimeter of a triangle whose side lengths are 7 cm, $5\sqrt{3}$ cm, and $\sqrt{12}$ cm. Give the answer as a radical expression in simplest form.

A. $(7 + 5\sqrt{3} + \sqrt{12})$ cm

B. $(7 + 7\sqrt{3})$ cm

C. $(7 + 9\sqrt{3})$ cm

D. $14\sqrt{3}$ cm

____ **76** Multiply $\left(\sqrt{10} - 9\right)^2$. Write the product in simplest form.

A. $91 - 18\sqrt{10}$

B. -71

C. $73\sqrt{10}$

D. $-71 - 18\sqrt{10}$

____ **77** Simplify $\frac{9}{\sqrt{6} - \sqrt{5}}$.

A. $9\sqrt{6} + 9\sqrt{5}$

B. 9

C. $\frac{9\sqrt{6} + 9\sqrt{5}}{\sqrt{6} - \sqrt{5}}$

D. $9\sqrt{6} - 9\sqrt{5}$

_____ **78** Find the excluded values of the rational expression $\frac{3}{n^2 - 5n + 4}$.

A. The excluded values are –4 and –1.
B. The excluded values are 3 and –5.
C. The excluded values are –5 and 4.
D. The excluded values are 4 and 1.

_____ **79** Simplify the rational expression $\frac{3r^2 - 9r}{r - 3}$. Identify any excluded values.

A. $3r$; $r \neq 3$
B. $3r$; $r \neq 3$ or 0
C. $3r$; no excluded values
D. $3r\left(r - 3\right)$; $r \neq 3$

_____ **80** Multiply. Simplify your answer.

$(x^2 + 9x + 14) \cdot \frac{9}{3x + 21}$

A. $\frac{(x + 2)(x + 7)}{1} \cdot \frac{9}{3(x + 7)}$
B. $3x + 6$
C. $\frac{3}{x + 7}$
D. $\frac{(x + 2)}{1} \cdot \frac{9}{3}$

_____ **81** Simplify the complex fraction.

$$\frac{\frac{x^2 - x - 6}{2x^2 - 6x}}{\frac{x^2 + 4x + 4}{x^2 + x}}$$

A. $\frac{x + 1}{2x + 4}$
B. $\frac{x}{x^2 + 4}$
C. $\frac{2x^2 - 6}{3x^2 - 2x + 4}$
D. $\frac{1}{16}$

_____ **82** Add. Simplify your answer.

$\frac{3y}{9y^2} + \frac{3y}{18y}$

A. $\frac{1}{3}$
B. $\frac{2}{9y^2}$
C. $\frac{2 + y}{6y}$
D. $\frac{1}{y}$

_____ **83** Divide by using long division.
$(x^2 - x - 6) \div (x - 3)$

A. $x - 4$
B. $x + 2$
C. $x + 6$
D. $x - 2$

_____ **84** Solve $\frac{3}{q-4} = \frac{2}{5q}$. Check your answer.

A. $q = -\frac{8}{13}$
B. $q = -\frac{8}{17}$
C. $q = \frac{8}{13}$
D. $q = \frac{8}{17}$

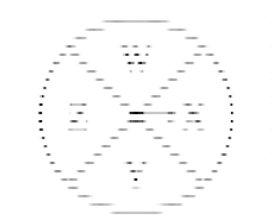
_____ **85** Solve $\frac{x}{x-1} = \frac{x+3}{-2x+2}$. Check for extraneous solutions.

A. $x = -1$ or $x = -2$
B. $x = -1$
C. $x = 1$
D. $x = 1$ or $x = -1$

_____ **86** A chemist has 600 milliliters of a solution that is half acid. She needs a solution that is 70% acid. How many milliliters of acid she should add?

A. 300 mL
B. 400 mL
C. 500 mL
D. 600 mL

_____ **87** Identify the sample space and the outcome shown for spinning the game spinner.



A. Sample space: {W, X, Y, Z}
Outcome shown: Z
B. Sample space: {V, W, X, Y, Z}
Outcome shown: X
C. Sample space: {W, Y, Z}
Outcome shown: X
D. Sample space: {W, X, Y, Z}
Outcome shown: X

_____ **88** An experiment consists of spinning a spinner. Use the results in the table to find the experimental probability that the spinner does not land on purple. Express your answer as a fraction in simplest form.

Outcome	Frequency
red	8
purple	12
yellow	10

A. $\frac{11}{15}$
C. $\frac{3}{5}$
B. $\frac{2}{5}$
D. $\frac{4}{15}$

_____ **89** An experiment consists of rolling a number cube. Find the theoretical probability of rolling a number greater than 4. Express your answer as a fraction in simplest form.

A. $\frac{2}{3}$
C. $\frac{1}{2}$
B. $\frac{1}{6}$
D. $\frac{1}{3}$

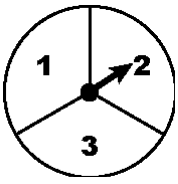
_____ **90** An experiment consists of rolling a number cube. Find the theoretical probability of rolling a number less than or equal to 5. Express your answer as a fraction in simplest form.

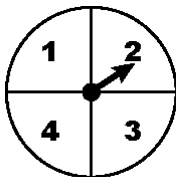
A. $\frac{1}{3}$
C. $\frac{2}{3}$
B. $\frac{1}{6}$
D. $\frac{5}{6}$

_____ **91** The probability of drawing a green marble from a marble bag is 40%. What are the odds in favor of drawing a green marble?

A. 5:2
C. 2:3
B. 3:2
D. 2:5

_____ **92** Jean spins two spinners. The results of both spins are shown. Tell whether the events are dependent or independent. Explain your answer.





A. The spin on the first spinner does not affect the spin on the second, so the events are independent.
B. The spin on the first spinner does not affect the spin on the second, so the events are dependent.
C. The spin on the first spinner affects the spin on the second, so the events are independent.
D. The spin on the first spinner affects the spin on the second, so the events are dependent.

____ **93** The daily low temperatures in degrees Fahrenheit in a city for February 1–14 are given. Use the stem-and-leaf plot to answer the question.
On how many days were the temperatures lower than 20° F?

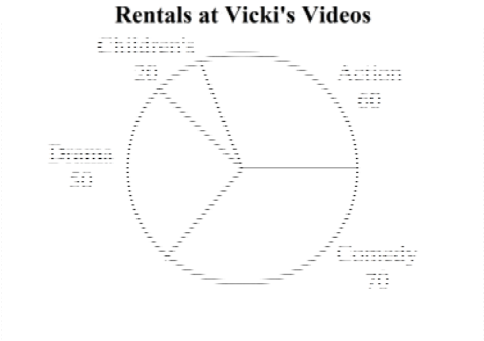
February Temperatures

Stem	Leaves
1	7 7 8 8
2	0 1 3 3 5 6 6 7
3	3 9

Key: 2|3 *means* 23

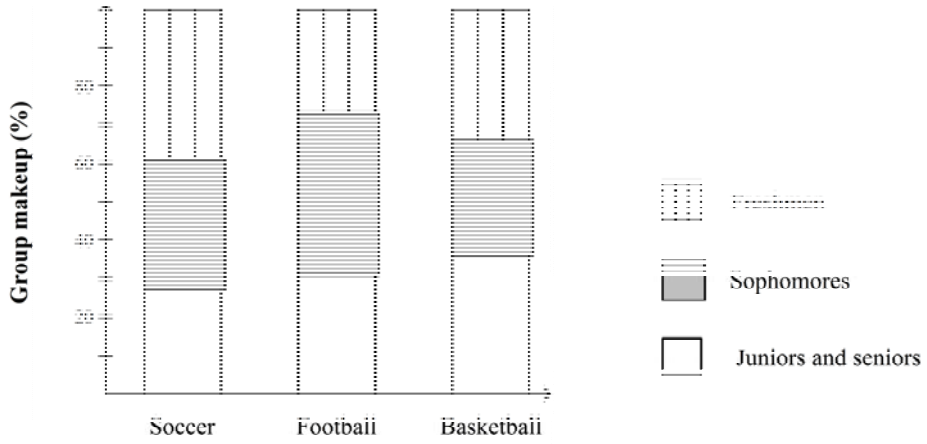
A. 5
B. 7
C. 4
D. 6

____ **94** Which type of video was rented most often? Use the graph to find the answer.



A. Comedy
B. Children's
C. Action
D. Drama

_____ **95** In each of the sports teams at the local high school, there are students from all grades. On which sports team is the percentage of juniors and seniors higher than the percentage of sophomores?



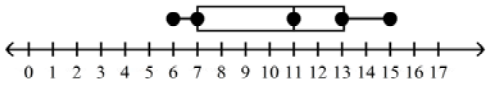
A. Soccer team
B. Basketball team
C. None
D. Football team

_____ **96** The monthly rents for five apartments advertised in a newspaper were $650, $650, $740, $1650, and $820. Use the mean, median, and mode of the rents to answer the question. Which value best describes the monthly rents? Explain.
mean = $902, median = $740, mode = $650

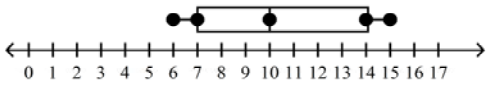
A. The median best describes the rents because most of the rents were near $740.
B. The mode best describes the rents because $650 was the rent seen most often.
C. The mean best describes the rents because $902 is the average rent.

_____ **97** The number of calls answered by a paramedic team over an 8-day period are given. Use the data to make a box-and-whisker plot.
12, 6, 8, 15, 14, 6, 14, 10

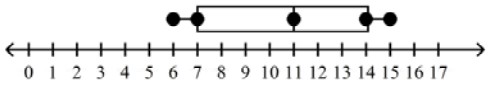
A.



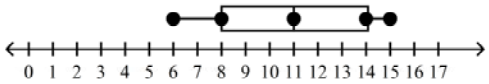
B.



C.



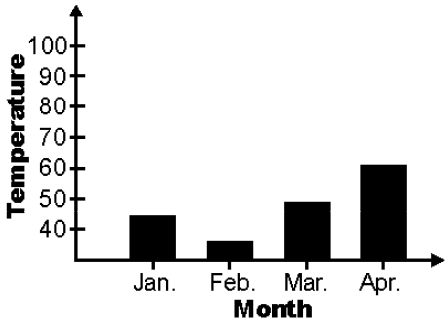
D.



_____ **98** The data {1, 5, 8, 5, 1} represent a random sample of the number of days absent from school for five students at Monta Vista High. Find the mean and the standard deviation of the data.

A. The mean is 4, and the standard deviation is about 2.68.
B. The mean is 4.4, and the standard deviation is about 2.76.
C. The mean is 20, and the standard deviation is about 7.6.
D. The mean is 4, and the standard deviation is about 7.2.

____ **99** The bar graph represents the average temperatures in a city over the first four months of the year. Explain why the graph is misleading. What might someone believe because of the graph?



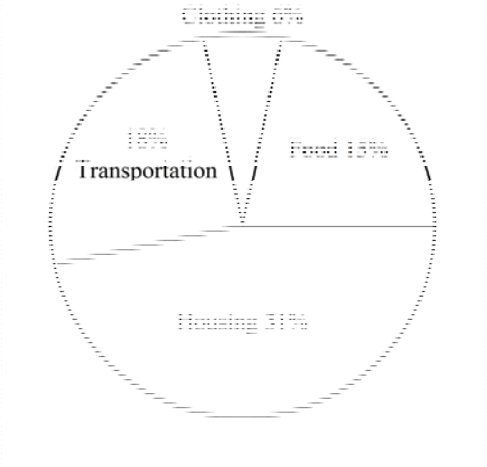
A. The graph is misleading because a bar graph is not a good way to compare temperatures.
Someone might believe that temperatures in March were only a little warmer than in January. In fact, they were much warmer.

B. The graph is misleading because the scale on the vertical axis begins at 30.
Someone might believe that the average temperature in February was less than half the January temperature. In fact, they were only 10 degrees less than those in January.

C. The graph is misleading because the intervals are too large to show a gradual change in temperature.
Someone might believe temperatures increased 10 degrees from February 28 to March 1. In fact, the change in temperature was probably only a degree or two each day.

D. The graph is misleading because the scale on the vertical axis is inconsistent.
Someone might believe that the temperatures in April were only a little warmer than in March. In fact, they were more than 10 degrees warmer.

____ **100** The circle graph shows how the average American family spends its money. Explain why the graph is misleading.



A. A family with an annual income of $32,000 spends about $2000 on clothing.
B. The sections of the graph do not add to 100%, so the percent for at least one type of expense is not represented.
C. Some people might believe that transportation is a major expense.
D. The amount of money spent on transportation and food exceeds the amount of money spent on housing.