ALGEBRA SKILLS

Main Ideas	Details
Exponents and Powers	A) $f(x)=2^x$ when x = 4 B) $f(x)=x^3$ when x = 4 C) $(x+y)^3$ when x = 2 and y = 1 D) $(x-y)^3$ when x = 2 and y = 1 E) $f(x)=(x-4)^2$ when x = 10 F) $x-y^3$ when x = 10 and y = 2 G) x^2-y^3 when x = 10 and y = 4

	A) $f(x)=(2x)^2$ when x = 3 B) $f(x)=2x^2$ when x = 3 C) $f(x)=(3x)^4$ when x = 2 D) $f(x)=3x^4$ when x = 2

Evaluate the expression	A) $5 + 10 - 2$	B) $10 \div 2 + 3 \cdot 4$
	C) $6 + 2 \cdot 4 - 3$	D) $12 \div 2 \cdot 4^2$
	E) $2 \cdot 3^2 \div 3$	F) $10 \div (3 + 2) + 9$
	G) $7[(18 - 6) - 6]$	H) $[10 + (3^2 \cdot 2)] \div 4$
	I) $\dfrac{10 \cdot 2}{3 + 2^3 - 1}$	J) $\dfrac{13 - 4}{18 - 4^2 + 1}$

Evaluate the expression for the given value of the variable	A) $f(x)=4+3x^2$ x=2 B) $f(x)=5\cdot 3x^2$ x=3 C) $f(x)=4x^2+10$ x=2 D) $f(x)=\frac{x}{2}+4\cdot 5$ x=10 E) $f(x)=\frac{x-3}{2}$ x=10 F) $f(x)=\frac{2x-6}{5}$ x=8 G) $\frac{3x-y}{5}$ when x = -10 y = 15 H) $\frac{2x^2-3}{y}$ when x = -3 y = 5

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The Real Number Line	Graph the numbers on a number line and then write the numbers in decreasing order. A) 2, -4, 0 B) -0.1, -1.1, -1 C) $-\frac{1}{2}, -\frac{3}{4}, \frac{1}{4}$ Write the numbers in increasing order D) 4.66, 0.7, 4.6, -1.8, 3, -0.66 E) $7, -\frac{1}{2}, 2.4, -\frac{3}{4}, -5.8, \frac{1}{3}$ Evaluate the expression $F)\ \lvert -10 \rvert$ $G)\ \lvert 2.5 \rvert$ $H)\ \left\lvert -\frac{2}{3} \right\rvert$ $I)\ \lvert -509 \rvert$

Main Ideas	Details
Adding and Subtracting Real Numbers	A) -7 + 10 B) 4 + (-9) C) -5 + (-5) D) -5 + 5 E) -3 + 7 + (-4) F) 3 + (-10) + 8 G) -5 + (-7) + 6 H) 3 - 7 I) 6 – (-2) J) -1 – (-5) K) -4 – 6 L) 3 – (-2) – 5 K) 10 + (-4) – 5 L) 12 – 5 + 10 – (-8) M) $5-\|3\|$ N) $5-\|-3\|$ O) $-5-\|3\|$ P) $-5-\|-3\|$

Main Ideas	Details
Evaluate the expression	A) $f(x) = -5x$ when $x = 2$ B) $f(x) = x^3 - 2$ when $x = -3$ C) $f(x) = 2x^2 - 3x$ when $x = -3$ D) $f(x) = 2x + x^3$ when $x = -2$ E) $f(x) = -3x^2 + 2x - 5$ when $x = 3$ F) $f(x) = \lvert x - 3 \rvert$ when $x = -3$

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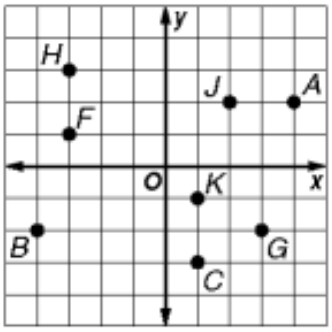
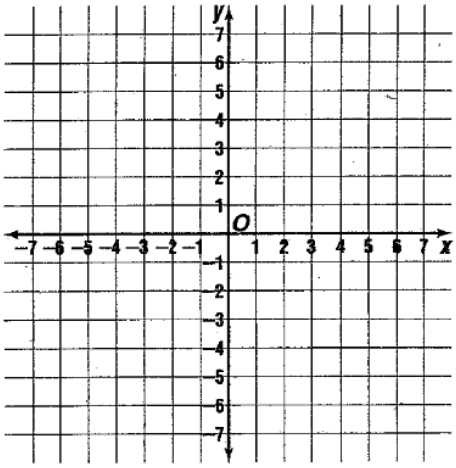
Use the distributive property to rewrite the expression without parenthesis	A) $5(x - 2)$ B) $-2(x - 4)$ C) $-3(x + 5)$ D) $(x + 2)6$ E) $\frac{3}{5}(x+10)$ F) $\frac{-2}{3}(x-6)$

Simplify the expression by collecting like terms	A) $5x + 2x$ B) $-5x + 2x$ C) $-5x – 2x$ D) $3 + x + 7$ E) $2 + x + x$ F) $2x + 10 – 7x – 4$ G) $-5 + 5x + 10 – 2x$
Simplify the expression	A) $-2(3x + 1) + 5x$ B) $3(2 – x) – x$ C) $-4(x + 2) – 6x$ D) $7x – 3x(x + 1)$

Main Ideas	Details
Use the Coordinate plane to the right and answer the following questions  ----------	1. What is the ordered pair for A? _____ 2. What Quadrant is B in? _____ 3. What is the ordered pair for F? _____ 4. What is the ordered pair for K? _____ 5. What point is at (1, -3) _____ 6. What point is at (-3, 3) _____ ----------
Plot and label the following points on the coordinate plane to the left. ----------	7. Label the 4 Quadrants 8. M (2, -4) 9. A (0, 4) 10. T (-3, 2) 11. H (-5, -4) 12. R (6, 6) 13. O (-7, 0) 14. X (-1, 5)  ----------
Write an ordered pair for each of the following.	15. A point in Quadrant I _____ 16. A point in Quadrant II _____ 17. A point in Quadrant III _____ 18. A Point in Quadrant IV _____ 19. A point on the X axis _____ 20. A point on the Y axis _____