

Final Exam Review Sheet #4

Lesson 76 to Lesson 100

Algebra 1 Accelerated

Name: _____

1. Find the distance between $(-1, -8)$ and $(6, 5)$.

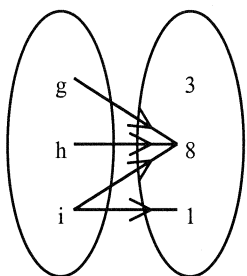
2. If $f(x) = x^2 + 5x$, find $f(s + 4)$.

[A] $4s^2 + 13s + 40$ [B] $4s^2 + 15s + 40$ [C] $s^2 + 15s + 36$ [D] none of these

3. Indicate which of the following depict functions.

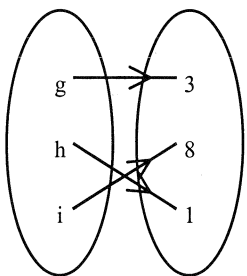
(a) $\{(7, 8), (1, 3), (1, 2), (2, 2)\}$

(b)



(c) $\{(7, 8), (7, 3), (9, 2), (2, 1)\}$

(d)



4. Divide: $\frac{2x^2 + 7x + 6}{2x^2 - 5x - 12} \div \frac{x^2 + 7x + 10}{-3x^2 - 3x + 60}$

[A] -4

[B] $x + 5$

[C] -3

[D] $x + 2$

5. When Randon counted the pennies and quarters he earned at the yard sale there were 185 coins. If the total was \$15.53, how many of each kind of coin did he have?

[A] 78 pennies and 107 quarters

[B] 128 pennies and 57 quarters

[C] 107 pennies and 78 quarters

[D] 57 pennies and 128 quarters

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6. Deanna and Burt walked to the dock at 3 miles per hour, jumped into the boat, and motored to Dillion at 7 miles per hour. If the total distance was 29 miles and the trip took 5 hours in all, how far did they go by boat?

7. Graph the following inequality on a number line: $-3x + 9 \leq -6$; $D = \{\text{Real numbers}\}$

8. Solve: $36x = x^2$

[A] -6, 6

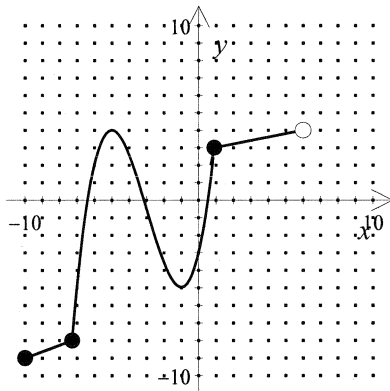
[B] 0, 36

[C] 0, 6

[D] 1, 36

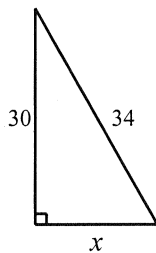
9. Multiply: $\frac{5m^2 + 14m + 8}{5m^2 - 9m + 4} \cdot \frac{20m^2 - 16m}{4 - m^2}$

10. Find the domain and range of the graphed function.



11. Divide: $(3x^3 - 2x + 2) \div (x + 1)$

12. Use the Pythagorean Theorem to find x .



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13. Divide: $(x^3 + 2x + 7) \div (x - 1)$
14. Emily hopped onto her bicycle and rolled to the park at 12 miles per hour. Then she whizzed back at 20 miles per hour. If the total trip took $1\frac{3}{5}$ hours, how far was it to the park?
15. Solve the system or determine whether it is inconsistent or dependent.
$$\begin{cases} 2x + 12y = 2 \\ x + 6y = 12 \end{cases}$$

[A] dependent [B] (8, 13) [C] inconsistent [D] (10, 14)
16. Solve: $\frac{x+1}{2} - \frac{x-1}{6} = 2$
17. Simplify: $3\sqrt{2}(7\sqrt{6} - 4\sqrt{4})$
18. Solve: $x^2 = 100$
19. The sum of two numbers is two hundred. Their difference is eighty. What are the numbers?

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20. The list shows the number of points scored by a basketball team in 20 games.

61, 95, 68, 64, 57, 82, 66, 99, 90, 83, 69, 77, 78, 73, 86, 52, 80, 91, 65, 74

a) Construct a stem-and-leaf plot for the data.

b) In how many games were more than 72 points scored?

[A]

a) 50		0 1 5 9
60		2 7
70		3 4 7 8
80		0 2 3 6
90		1 4 5 6 8 9

b) 11

[B]

a) 50		2 7
60		3 4 7 8
70		0 1 5 9
80		1 4 5 6 8 9
90		0 2 3 6

b) 12

[C]

a) 5		2 7
6		1 4 5 6 8 9
7		3 4 7 8
8		0 2 3 6
9		0 1 5 9

b) 12

[D]

a) 5		2 7
6		3 4 7 8
7		0 1 5 9
8		1 4 5 6 8 9
9		0 2 3 6

b) 11

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Key

[1] $\sqrt{218}$

[2] D

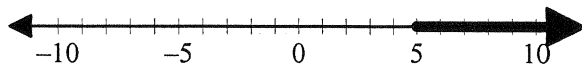
[3] (a) no (b) no (c) no (d) yes

[4] C

[5] B

[6] $24\frac{1}{2}$ miles

[7] _____



[8] B

[9] $\frac{4m(5m+4)}{(2-m)(m-1)}$

$D = \{x \mid -10 \leq x < 6\}$

[10] $R = \{y \mid -9 \leq y \leq 4\}$

[11] $3x^2 - 3x + 1$ R 1

[12] 16

[13] $x^2 + x + 3 + \frac{10}{x-1}$

[14] 12 miles

[15] C

[16] 4

[17] $42\sqrt{3} - 24\sqrt{2}$

[18] -10, 10

[19] 60 and 140

[20] C