Math 100 Midterm Form A

Name_____ Section_____ Date_____

SHORT ANSWER. Write the solution or phrase that best completes each statement or answers the question.

Evaluate the expression for a = –5, b = 16 and c = 7.

1) $\frac{4c - a^2}{8a + c^2}$

1. _____
points

MULTIPLE CHOICE. Choose the one alternative that best completes the statement or answers the question.

Provide an appropriate response.

2) Which property justifies the statement?
$(2 + 5) + 3 = (5 + 2) + 3$

2. _____
points

A) Commutative property
B) Inverse property
C) Associative property
D) Distributive property

SHORT ANSWER. Write the solution or phrase that best completes each statement or answers the question.

Solve the equation.

3) $\frac{p}{4} - \frac{3p}{8} = 3$

3. _____
points

4) $7(x + 7) = (7x + 49)$

4. _____
points

MULTIPLE CHOICE. Choose the one alternative that best completes the statement or answers the question.

Decide whether the equation is conditional, an identity, or a contradiction. Give the solution set.

5) $20k + 81 = 5(4k + 15)$

5. _____
points

A) Conditional; {−4}
B) Conditional; {4}
C) Contradiction; ∅
D) Identity; {all real numbers}

SHORT ANSWER. Write the solution or phrase that best completes each statement or answers the question.

Solve the formula for the specified variable.

6) $A = \frac{1}{2}h(b_1 + b_2)$ for b_1

6. _____
points

Solve the mixture problem.

7) In a chemistry class, 7 liters of a 4% silver iodide solution must be mixed with a 10% solution to get a 6% solution. How many liters of the 10% solution are needed?

_____
points

Solve the inequality. Give the solution set in both interval and graph forms.

8) $-5(5y - 2) < -30y - 25$

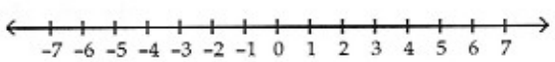
_____ points

For the compound inequality, give the solution set in both interval and graph forms.

9) $-4x + 1 \geq 9$ or $3x + 3 \geq -9$

_____ points

10) $4x + 1 \geq -7$ and $4x + 10 \geq 18$

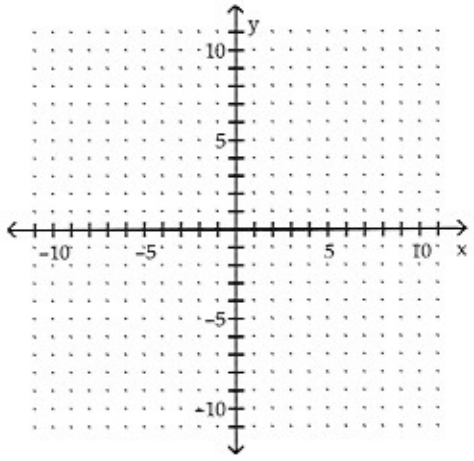


_____ points

Find the slope of the line and sketch the graph.

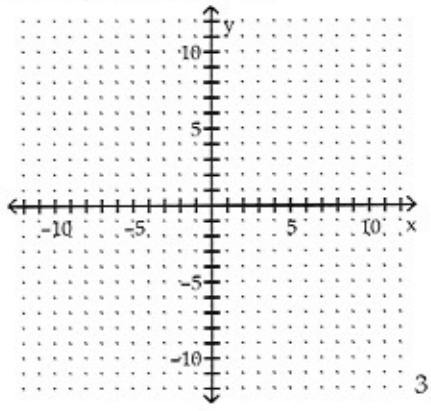
14) $2x - 3y = -6$

_____
points



Graph the line described.

15) Through $(-6, 9)$; $m = 0$



3 points

Solve the problem.

16) Find $g(a - 1)$ when $g(x) = 5x - 3$.

_____
points

Find an equation of the line that satisfies the conditions. Write the equation in standard form.

17) Through $(5, 4)$; $m = -\frac{3}{7}$

_____
points

Find an equation of the line satisfying the conditions. Write the equation in slope–intercept form.

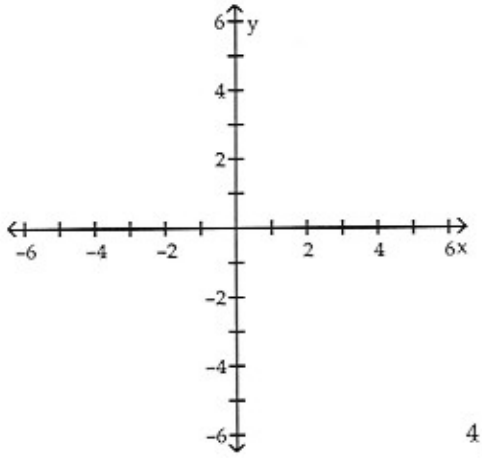
18) Through (–3, 8); perpendicular to $-3x + 4y = -23$

23. _____

4 points

Graph the inequality.

19) $2x + y \leq 4$



4 points

Solve the system by elimination. If the system is inconsistent or has dependent equations, say so.

20) $x + 3y = -2$
$4x + 4y = -8$

26. _____

4 points

Solve the problem.

21) Ron and Kathy are ticket-sellers at their class play. Ron is selling student tickets for $4.00 each, and Kathy selling adult tickets for $6.50 each. If their total income for 29 tickets was $138.50, how many tickets did Ron sell?

_____
points