

Name _____

Date _____

Solutions to Equations and Systems Final Review

Math 8

1. Determine the number of solutions (one, no, infinitely many) for each.

a) $4x + 3 - 2x = 2x - 3$

b) $4(x + 2) = 2(x + 6) - 4$

c) $x + 3(x - 1) + 4 = 4x + 1$

2. Find the value of y when $x = 6$ and $\frac{3y + 9}{8} = x$

3. Solve for x .

a) $7(x + 1) = 3(x - 2) - 3$

b) $5(x - 1) + 4 = 3(x + 6) + 1$

c) $\frac{1}{2}(8x + 12) = 2(x - 1)$

4. Solve for x . Determine whether the equation has infinitely many solutions or no solution. Justify your answer.

a) $4(x - 1) = 4(x - 2) - 6$

b) $3(x + 2) = 3(x + 1) + 3$

5. Verizon charges a monthly fee of \$8.60 and \$0.05 for each text message sent. Sprint charges a monthly fee of \$9.80 and \$0.03 for each text message sent. How many text messages must be sent for both companies to charge the same amount?

6. Solve the system of linear equations using the elimination method.

a) $x + y = 16$
 $x - y = 4$

b) $3x + 2y = 4$
 $x - y = 3$

c) $x + y = 30$
 $x - y = 10$

d) $x + y = 22$
 $x - y = 44$