

### Algebra 3

#### Answers to Summer Review Problems

1. **Z, Q, R**
2. **Q, R**
3. **W, Z, Q, R**
4. **Q, R**
5. **I, R**
6. **I, R**
7. **N, W, Z, Q, R**
8. **N, W, Z, Q, R**
9. **I, R**
10. -13
11. -108
12. -9
13. (a)  $2 + 7 = 7 + 2$  (Answers may vary.) The Commutative Property of Addition states that the order of the addends in an addition problem does not affect the outcome (sum).  
(b)  $2 \cdot 7 = 7 \cdot 2$  (Answers may vary.) The Commutative Property of Multiplication states that the order of the factors in a multiplication problem does not affect the outcome (product).
14. (a)  $(2 + 3) + 5 = 2 + (3 + 5)$  (Answers may vary.) The Associative Property of Addition states that the grouping of the addends in an addition problem does not affect the outcome (sum).  
(b)  $(2 \cdot 3)5 = 2(3 \cdot 5)$  (Answers may vary.) The Associative Property of Multiplication states that the grouping of the factors in a multiplication problem does not affect the outcome (product).
15. 1 When any real number is multiplied by 1, its value is unchanged.
16. 0 When any real number is added to 0, its value is unchanged.
17. (a)  $\frac{2}{7}$  (b) -3.4
18. (a)  $-\frac{4}{3}$  (b) 1
19. (a)  $3x - 3y$  (b)  $5a + 5b + 10c$  (c)  $10 - 2x$
20. (a)  $3(x - 2y)$  (b)  $b(ac^2 + 3)$
21. An equation states that two expressions are equal.
22. {5}
23. {0}
24.  $\left\{\frac{31}{42}\right\}$
25.  $\left\{-\frac{2}{43}\right\}$
26.  $\left\{-\frac{99}{56}\right\}$

27. {all real numbers}

28. {0}

29.  $\emptyset$  (Note: This symbol indicates that the equation has no solution.)

30.  $\left\{\frac{11}{6}\right\}$

31.  $\left\{\frac{21}{5}\right\}$

32. {-2}

33.  $\left\{\frac{4}{3}\right\}$

34.  $\left\{m \mid m > -\frac{5}{3}\right\}$



35.  $x \mid x \geq -3$



36.  $\left\{\frac{P-2l}{2}\right\}$

37.  $\left\{\frac{S-2\pi r^2}{2\pi r}\right\}$

38.  $\left\{\frac{I}{pr}\right\}$

39.  $\left\{\frac{q-4sW}{3}\right\}$

40.  $x + 3$

41.  $2x + 7$

42.  $5x - 2$

43.  $\frac{4}{x} - 8$

44.  $x^2 + 12$

45.  $2 < 3(6 + x)$

46.  $5(x - 2) = x + 4$

47.  $\frac{5}{3}$

48. -8

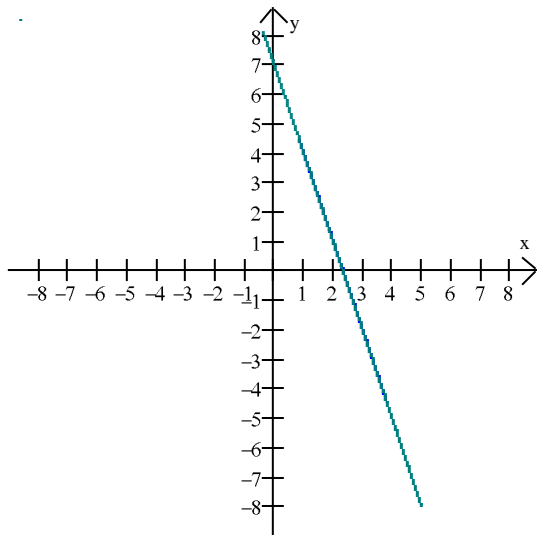
49.  $\frac{5}{7}$

50.  $\frac{5}{3}$

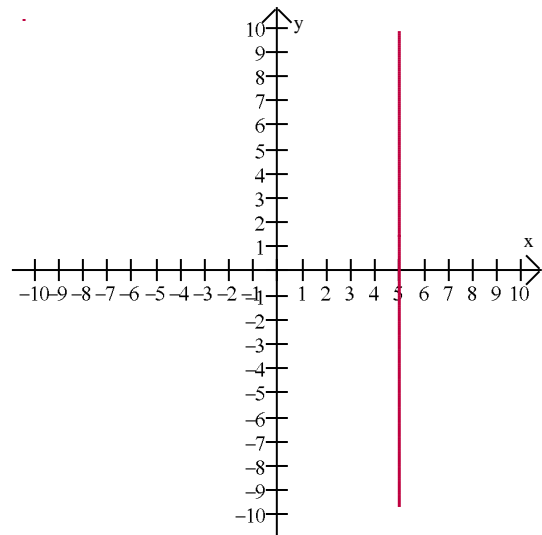
51.  $\frac{1}{2}$

52. undefined ("no slope")

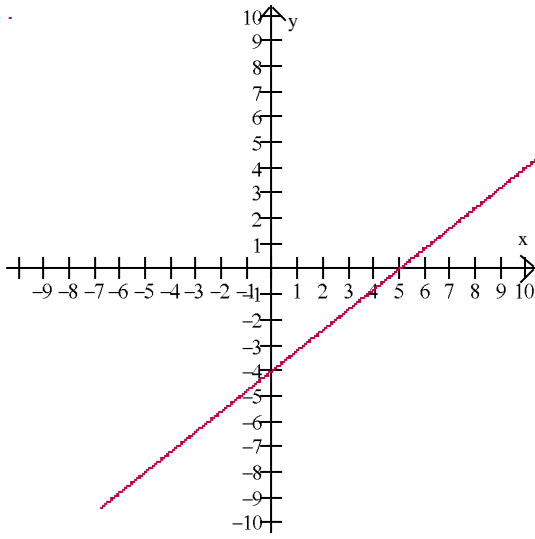
53.



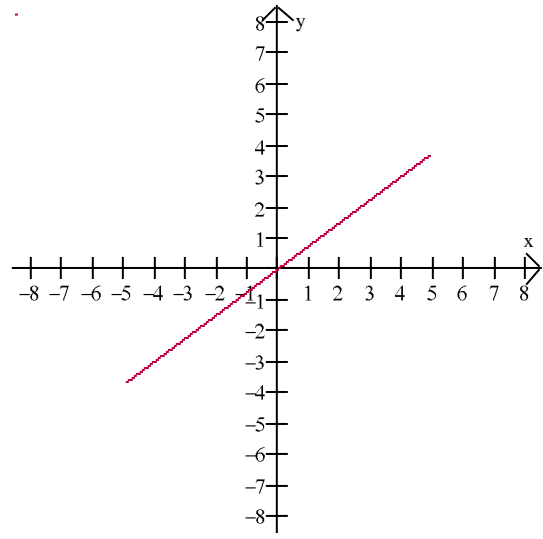
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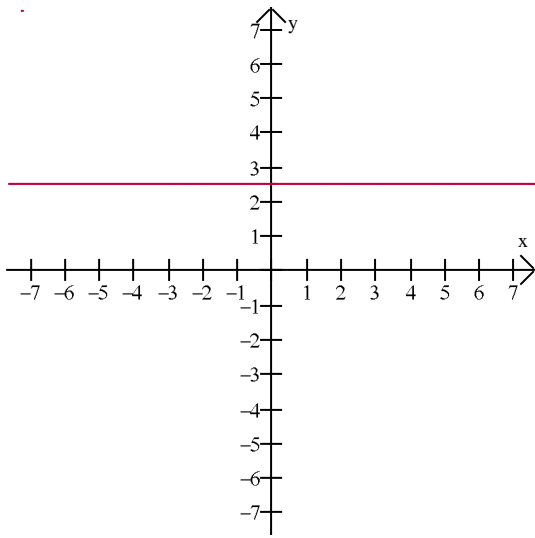
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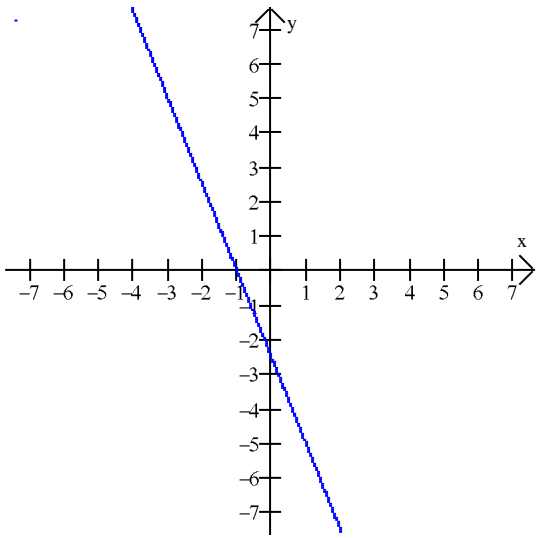
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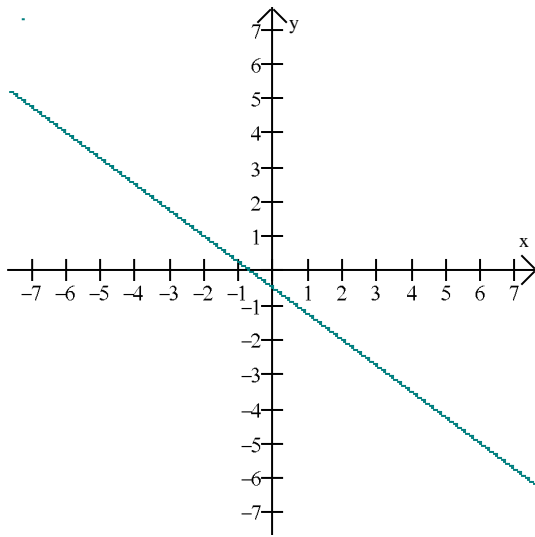
57.



58.



59.



60.

