

Explain the sign rule using the distributive property

NAME	DATE	SCORE / 10
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1 $(-5)(5 + (-5)) = (-5)(5) + (-5)(-5)$. The left side is 0, because $5 + (-5) = 0$. What must $(-5)(-5)$ equal, and why?

- ☐ 0, because $5 + (-5) = 0$.
 ☐ 25, because $-25 + 25 = 0$.
 ☐ -25, because $(-5)(5) = -25$.
☐ -25, because the product of two negative numbers is negative.

2 Use $(-6)(7 + (-7)) = (-6)(7) + (-6)(-7)$ to explain why $(-6)(-7)$ must be positive.

3 $(-5)(7 + (-7)) = (-5)(7) + (-5)(-7)$. The left side is 0, because $7 + (-7) = 0$. What must $(-5)(-7)$ equal, and why?

- ☐ 0, because $7 + (-7) = 0$.
 ☐ -35, because the product of two negative numbers is negative.
☐ -35, because $(-5)(7) = -35$.
 ☐ 35, because $-35 + 35 = 0$.

4 Use $(-8)(8 + (-8)) = (-8)(8) + (-8)(-8)$ to explain why $(-8)(-8)$ must be positive.

5 $(-2)(8 + (-8)) = (-2)(8) + (-2)(-8)$. The left side is 0, because $8 + (-8) = 0$. What must $(-2)(-8)$ equal, and why?

- ☐ 0, because $8 + (-8) = 0$. ☐ 16, because $-16 + 16 = 0$.
☐ -16, because the product of two negative numbers is negative.
☐ -16, because $(-2)(8) = -16$.

6 Use $(-7)(3 + (-3)) = (-7)(3) + (-7)(-3)$ to explain why $(-7)(-3)$ must be positive.

7 $(-5)(3 + (-3)) = (-5)(3) + (-5)(-3)$. The left side is 0, because $3 + (-3) = 0$. What must $(-5)(-3)$ equal, and why?

- ☐ -15, because $(-5)(3) = -15$. ☐ 0, because $3 + (-3) = 0$.
☐ -15, because the product of two negative numbers is negative.
☐ 15, because $-15 + 15 = 0$.

8

Use $(-8)(6 + (-6)) = (-8)(6) + (-8)(-6)$ to explain why $(-8)(-6)$ must be positive.

9

$(-3)(3 + (-3)) = (-3)(3) + (-3)(-3)$. The left side is 0, because $3 + (-3) = 0$. What must $(-3)(-3)$ equal, and why?

- ☐ -9, because the product of two negative numbers is negative. ☐ 9, because $-9 + 9 = 0$.
☐ -9, because $(-3)(3) = -9$. ☐ 0, because $3 + (-3) = 0$.

10

Use $(-2)(7 + (-7)) = (-2)(7) + (-2)(-7)$ to explain why $(-2)(-7)$ must be positive.

Explain the sign rule using the distributive property

1 25, because $-25 + 25 = 0$.

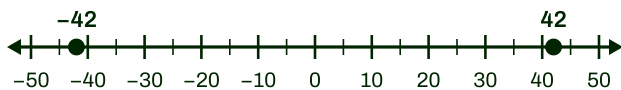
3 35, because $-35 + 35 = 0$.

5 16, because $-16 + 16 = 0$.

7 15, because $-15 + 15 = 0$.

9 9, because $-9 + 9 = 0$.

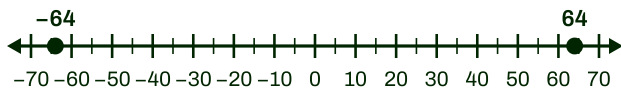
2 A written explanation



A model answer: $7 + (-7) = 0$, so the left side is $(-6)(0) = 0$. On the right, $(-6)(7) = -42$. So $-42 + (-6)(-7) = 0$, and the only number that adds to -42 to make 0 is 42. So $(-6)(-7) = 42$, which is positive.

What counts as right: Counts as right if it makes these points: (1) the left side is 0, because $7 + (-7) = 0$; (2) on the right, $(-6)(7) = -42$; (3) so $(-6)(-7)$ must be the number that adds to -42 to make 0, which is 42. Quoting “two negatives make a positive” does not count: that is the rule being explained.

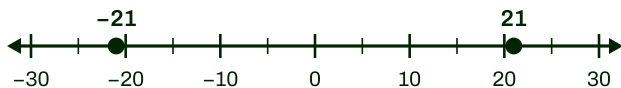
4 A written explanation



A model answer: $8 + (-8) = 0$, so the left side is $(-8)(0) = 0$. On the right, $(-8)(8) = -64$. So $-64 + (-8)(-8) = 0$, and the only number that adds to -64 to make 0 is 64. So $(-8)(-8) = 64$, which is positive.

What counts as right: Counts as right if it makes these points: (1) the left side is 0, because $8 + (-8) = 0$; (2) on the right, $(-8)(8) = -64$; (3) so $(-8)(-8)$ must be the number that adds to -64 to make 0, which is 64. Quoting “two negatives make a positive” does not count: that is the rule being explained.

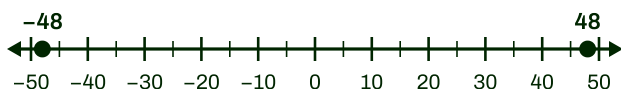
6 A written explanation



A model answer: $3 + (-3) = 0$, so the left side is $(-7)(0) = 0$. On the right, $(-7)(3) = -21$. So $-21 + (-7)(-3) = 0$, and the only number that adds to -21 to make 0 is 21. So $(-7)(-3) = 21$, which is positive.

What counts as right: Counts as right if it makes these points: (1) the left side is 0, because $3 + (-3) = 0$; (2) on the right, $(-7)(3) = -21$; (3) so $(-7)(-3)$ must be the number that adds to -21 to make 0, which is 21. Quoting “two negatives make a positive” does not count: that is the rule being explained.

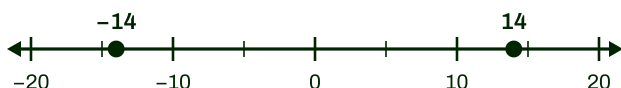
8 A written explanation



A model answer: $6 + (-6) = 0$, so the left side is $(-8)(0) = 0$. On the right, $(-8)(6) = -48$. So $-48 + (-8)(-6) = 0$, and the only number that adds to -48 to make 0 is 48. So $(-8)(-6) = 48$, which is positive.

What counts as right: Counts as right if it makes these points: (1) the left side is 0, because $6 + (-6) = 0$; (2) on the right, $(-8)(6) = -48$; (3) so $(-8)(-6)$ must be the number that adds to -48 to make 0, which is 48. Quoting “two negatives make a positive” does not count: that is the rule being explained.

10 A written explanation



A model answer: $7 + (-7) = 0$, so the left side is $(-2)(0) = 0$. On the right, $(-2)(7) = -14$. So $-14 + (-2)(-7) = 0$, and the only number that adds to -14 to make 0 is 14. So $(-2)(-7) = 14$, which is positive.

What counts as right: Counts as right if it makes these points: (1) the left side is 0, because $7 + (-7) = 0$; (2) on the right, $(-2)(7) = -14$; (3) so $(-2)(-7)$ must be the number that adds to -14 to make 0, which is 14. Quoting “two negatives make a positive” does not count: that is the rule being explained.