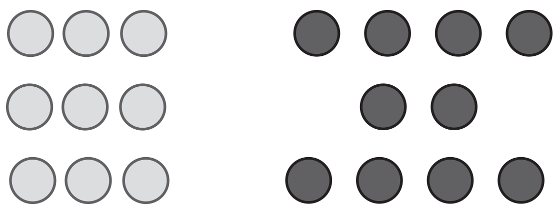
Name ____________________________

Use Two-Color Counters to model each addition problem. Make pairs of red and yellow counters. Find the sum.

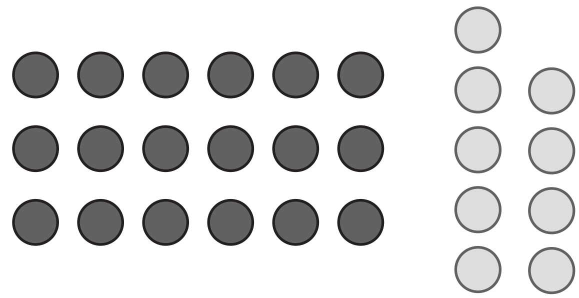
1.



9 + (–10)

____

2.



–18 + 9

____

Using Two-Color Counters, model each addition problem. Sketch the model. Find the sum.

3. 7 + (–4)

____

4. –12 + (–3)

____

Find each sum.

5. 11 + (–6) ____________

6. –5 + (–18) ____________

7. –4 + 13 ____________

8. 9 + (–21) ____________

9. –6 + (–14) ____________

10. –3 + (–18) ____________

11. 15 + 9 ____________

12. 26 + (–50) ____________

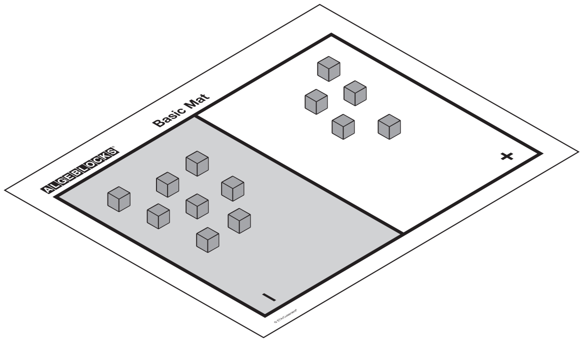
Name ___________________________

Challenge! Explain how to add two integers if one is a negative number and one is a positive number. When will the sum be negative? When will the sum be positive?

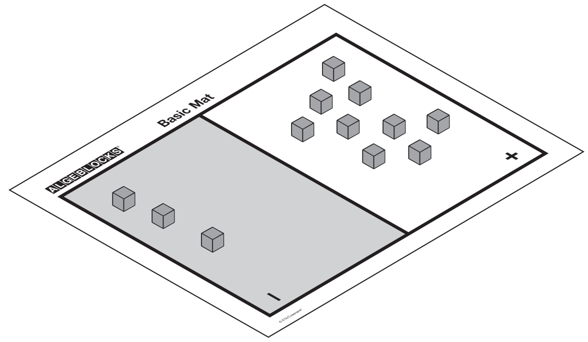
Name ____________________

Use Algeblocks unit blocks and a Basic Mat to model each integer addition sentence. Make zero pairs. Write the sum.

1. 5 + (–8) = ________

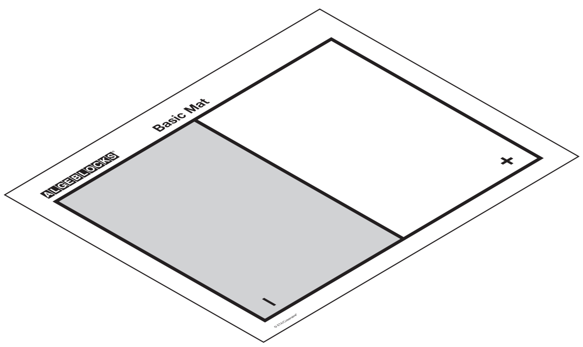


2. –3 + 9 = ________

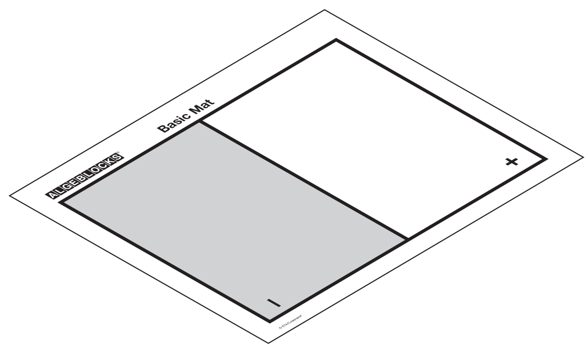


Using Algeblocks unit blocks and a Basic Mat, model each addition sentence. Sketch the model. Circle zero pairs. Write the sum.

3. 12 + (–7) = ________



4. –2 + (–5) = ________



Find each sum.

5. –5 + (–2) = ________

6. 15 + (–4) = ________

7. 8 + (–11) = ________

8. –9 + 13 = ________

9. –17 + (–4) = ________

10. 15 + 3 = ________

11. –12 + 12 = ________

12. 21 + (–7) = ________

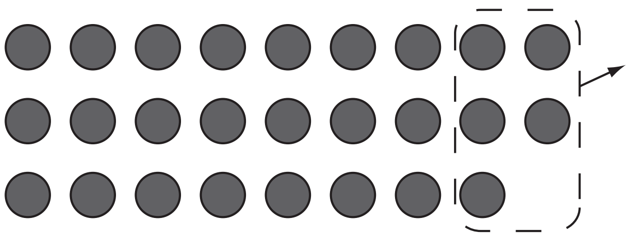
Name ___________________________________

Challenge! Describe how to find a sum of two integers when the signs of the integers are different. How do you decide the sign of the sum?

Name ____________________

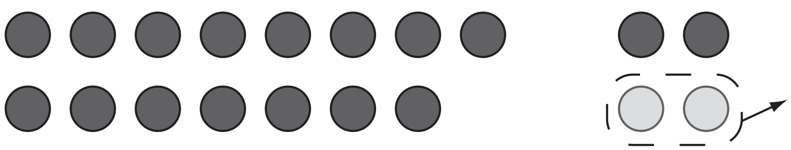
Use Two-Color Counters to model each subtraction problem. Write the number sentence for the difference.

1.



____

2.



____

Using Two-Color Counters, model each subtraction problem. Sketch the model. Find the difference.

3. 9 – (–4)

____

4. –14 – 5

____

Find each difference.

5. 21 – (–6) ________

6. –15 – 7 ________

7. –4 – 12 ________

8. –9 – (–7) ________

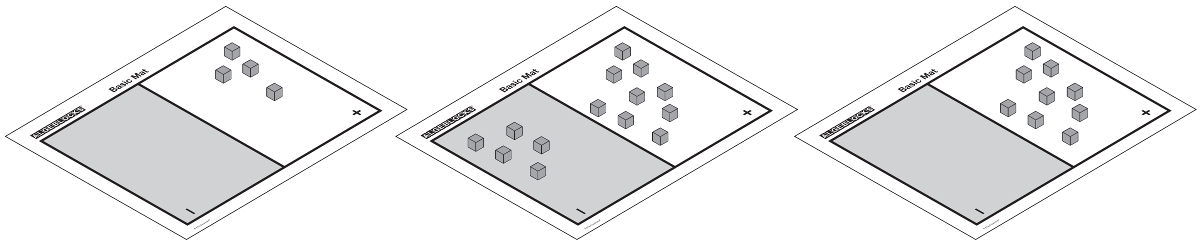
Name ___________________________

Challenge! Rewrite Questions 5–8 as addition problems. Find the sum. Did your answers change? Explain.

Name ________________________________

Use Algeblocks unit blocks and a Basic Mat to model the integer subtraction sentence. Make zero pairs. Write the difference. Explain your work.

1. 4 – (–5) = ________



____

____

Using Algeblocks unit blocks and a Basic Mat, model each subtraction sentence. Sketch the model. Make zero pairs. Write the difference.

2. –6 – 4 = ________

3. –9 – 7 = ________

Find each difference.

4. –3 – (–1) = ________

5. 13 – (–7) = ________

6. 8 – (–12) = ________

7. –5 – 11 = ________

8. –1 – 6 = ________

9. 9 – (–8) = ________

10. 14 – (–16) = ________

11. –15 – (–15) = ________

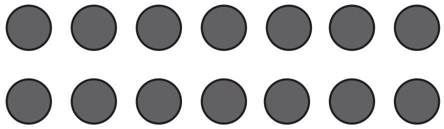
Name ___________________________________

Challenge! For the following subtraction problems, which ones require you to place additional unit blocks that equal zero pairs so that you can take away the number being subtracted? Explain.

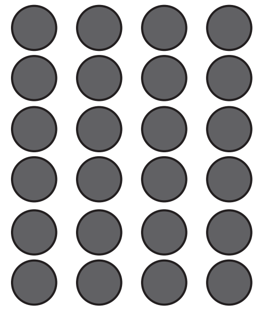
7 – 1   –7 – 1   7 – (–1)   –7 – (–1)

Name ______________________________

Use Two-Color Counters to model each multiplication problem. Use a number line to help. Write a number sentence for the product.

1. 

____

2. 

____

Using Two-Color Counters, model each multiplication problem. Sketch the model. Write the product.

3. 7 × (–4)

____

4. 10 × (–5)

____

Find each product.

5. 9 × (–6) ________

6. –5 × (–7) ________

7. –4 × 11 ________

8. 9 × 7 ________

9. –3 × (–1) ________

10. 8 × (–7) ________

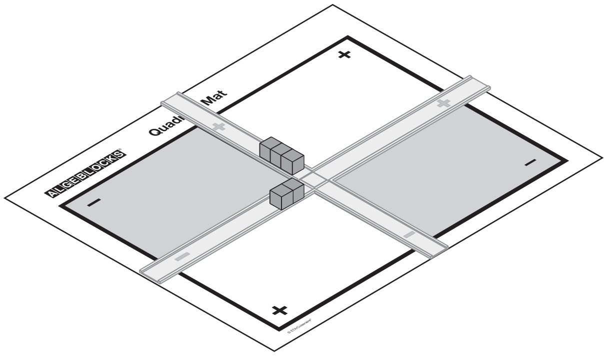
Name ______________________________

Challenge! What do you notice about the product when the factors have different signs? What do you notice about the product when the factors have the same signs? Draw pictures to help.

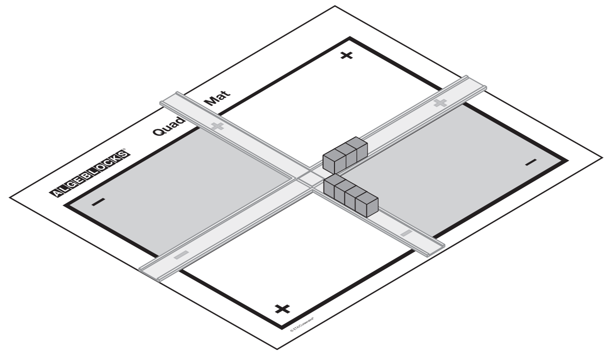
Name ________________________

Use Algeblocks unit blocks, a Quadrant Mat, and a Factor Track. Model each integer multiplication sentence. Find each product.

1. –2 × 3 = ________

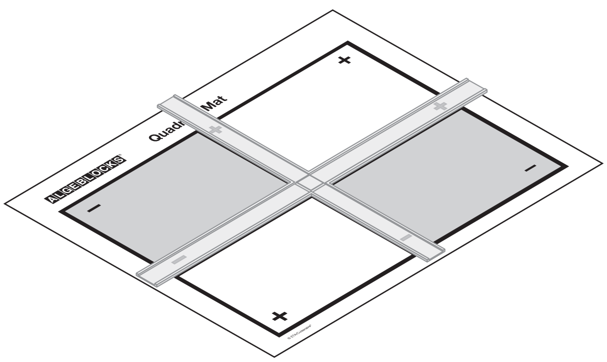


2. 3 × (–4) = ________

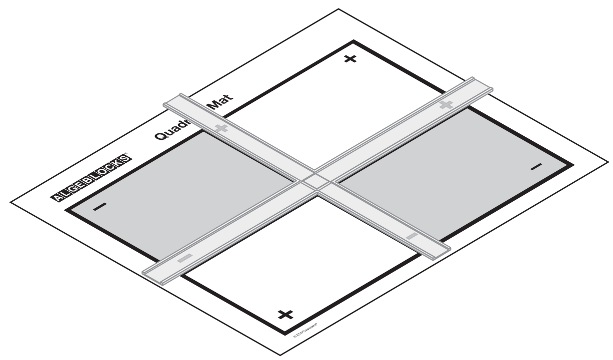


Using Algeblocks unit blocks, a Quadrant Mat, and a Factor Track, model each multiplication sentence. Sketch the model. Find the product.

3. –8 × (–2) = ________



4. 5 × (–4) = ________



Find each product.

5. 3 × (–6) = ________

6. –7 × (–3) = ________

7. –8 × 12 = ________

8. –9 × 5 = ________

9. –5 × (–6) = ________

10. 7 × (–8) = ________

11. 11 × (–6) = ________

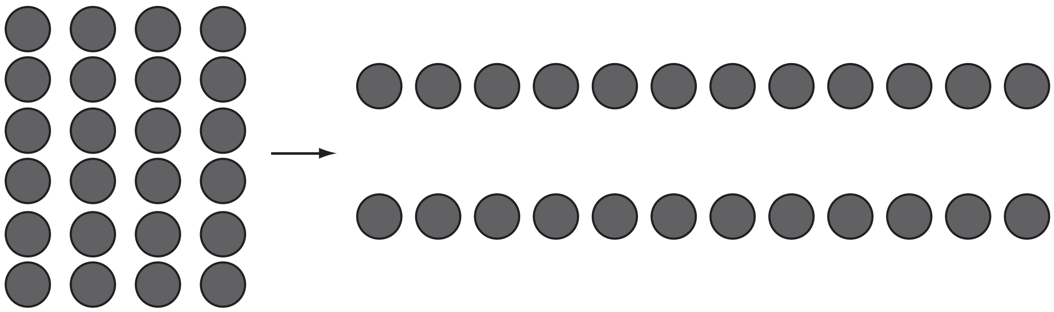
12. –4 × (–1) = ________

Name ______________________________

Challenge! If the product of two integers is positive, what can you conclude about the factors? Draw a picture to help.

Name ________________________________

Use Two-Color Counters to model each division problem. Write a number sentence for the quotient.

1. 

____

Using Two-Color Counters, model each division problem. Sketch the model. Find the quotient.

2. –35 ÷ 7

____

3. –81 ÷ 9

____

Find each quotient.

4. 49 ÷ (–7) = ________

5. –45 ÷ (–5) = ________

6. –42 ÷ 7 = ________

7. 9 ÷ (–3) = ________

8. –30 ÷ (–6) = ________

9. 28 ÷ (–7) = ________

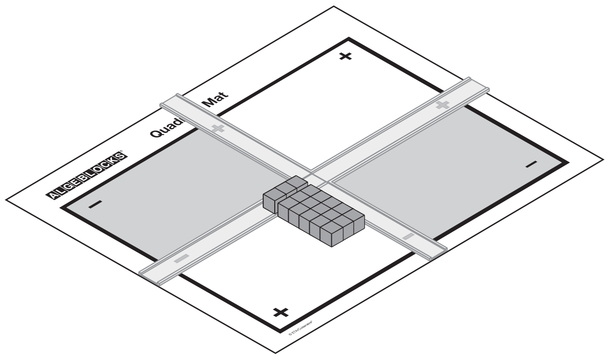
Name ______________________________

Challenge! How do the rules for dividing integers differ from the rules for multiplying integers? Draw pictures to help.

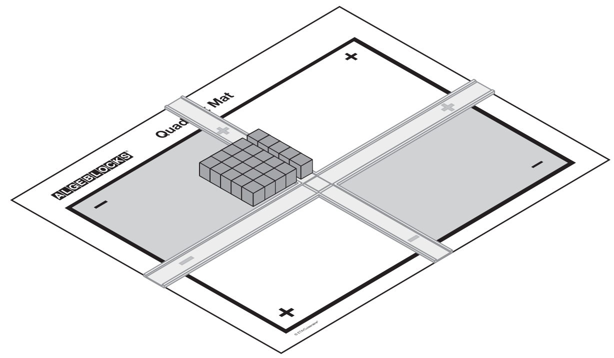
Name ___________________________________

Use Algeblocks unit blocks, a Quadrant Mat, and a Factor Track. Model each integer division sentence. Find each quotient.

1. 15 ÷ (–3) = ________

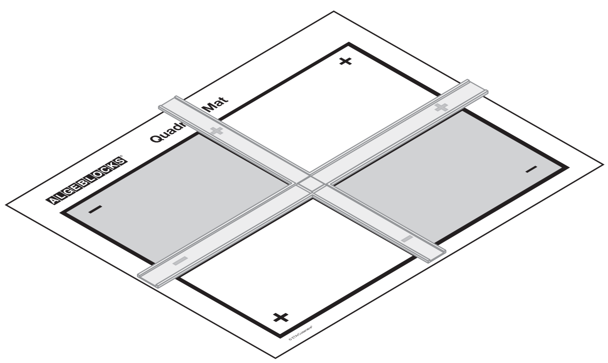


2. –20 ÷ (5) = ________

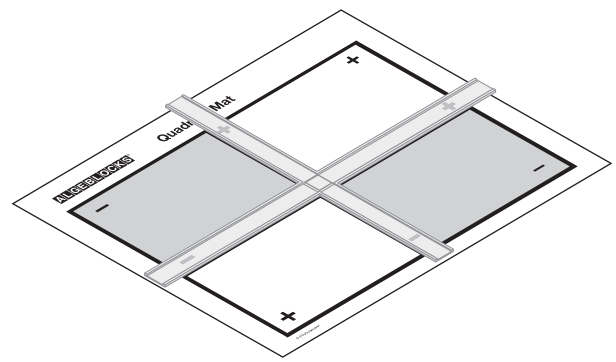


Using Algeblocks unit blocks, a Quadrant Mat, and a Factor Track, model each division sentence. Sketch the model. Find each quotient.

3. –28 ÷ (–7) = ________



4. 45 ÷ (5) = ________



Find each quotient.

5. 36 ÷ (–6) = ________

6. –27 ÷ (–3) = ________

7. –18 ÷ 3 = ________

8. –49 ÷ 7 = ________

9. –35 ÷ 5 = ________

10. 12 ÷ (–2) = ________

11. –24 ÷ (–4) = ________

12. –5 ÷ (–5) = ________

Name ___________________________________

Challenge! How do the rules for adding and subtracting integers differ from the rules for multiplying and dividing integers?