Name \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ Table# \_\_\_\_ Period: \_\_\_\_\_\_ Date:\_\_\_\_\_\_\_\_\_\_\_\_\_

**7.4e B Repeating Decimals\_Classwork**

*CCSS: 8.NS.1. Objective: Students can convert a repeating decimal to a fraction by writing and solving equations.*

*Video:* [*https://www.youtube.com/watch?v=tv2nz9PIZjY*](https://www.youtube.com/watch?v=tv2nz9PIZjY)*;* [*https://www.youtube.com/watch?v=84MiV7Kf1Fg*](https://www.youtube.com/watch?v=84MiV7Kf1Fg)

Multiply both sides by 10n

|  |  |
| --- | --- |
| # of decimals,*n* | 10n |
|  |  |
|  |  |
|  |  |

Examples

|  |  |
| --- | --- |
| Write $1.\overbar{25}$ as a mixed number. | Write $-0.2\overbar{3}$ as a fraction in simplest form. |

ON YOUR OWN

|  |  |
| --- | --- |
| 1. Write $-3.\overbar{81}$ as a fraction in simplest form | 2. Write $0.7\overbar{5}$ as a fraction in simplest form. |

CONTINUED ON BACK $\rightarrow $

CW (7.4e2) p. 317 #7 – 10. Write the decimal as a fraction or a mixed number.

|  |  |
| --- | --- |
| 7. $-0.4\overbar{3}$  | 8. $2.0\overbar{6}$  |
| 9. $ 0.\overbar{27}$ | 10. $-4.\overbar{50}$ |

|  |
| --- |
| 11. You and your friend are standing back-to-back. Your friend runs 15 feet forward, and then 8  feet right. At the same time, you run 12 feet forward, and then run 5 feet to the right. You  stop and throw a football to your friend, who catches it. How far did you throw the football? |