Whole class test: Decimals and Percent

Name: Class: Date:

1. Divide 34 by 5 in each of the spaces below. Show the leftover parts as:

    - A remainder

    - A common fraction

    - A decimal fraction

2. Draw a picture to show what 1.7 means. Draw what it would look like (e.g. if you made it from blocks).

3. Jenna had 2 and a half metres of fabric.

    - Write this as a decimal number:
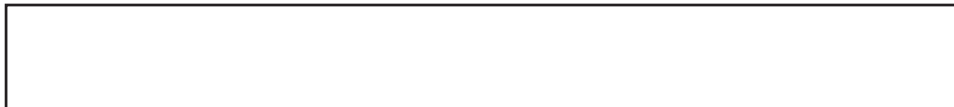
    - How many centimetres is two and a half metres?

4. Circle all the amounts below that are the same as 1.2

$^{12}/_{10}$ 1.02 $^{10}/_2$

½   One and Two Hundredths

One and 20 tenths   1.20

5. Colour the decimal fractions listed on the bars below. Each bar is equal to one whole.

0.2

0.85

0.20

6. Jenna had 2 and three quarter metres of fabric.

- Write this as a decimal number:

- How many centimetres is two and three quarter metres?

7. Divide 33 by 4 in each of the spaces below. Show the leftover parts as:

- A common fraction

- A decimal fraction

8. Fill in the missing spaces in the table below:

Decimal Number	Fraction	Rounded to the nearest 0.1	Rounded to the nearest 0.01
0.275			
	$3453/1000$		
2.996			
	$2043/1000$		

9. A dress that normally costs $50 was on sale. The percentage off is shown below. Calculate both:
    a. The **discount**
    b. The **sale price**
        Show all of your working out.

Scenario A: 20% discount   **Scenario B: 45% discount**

Whole class test: Answers and interpretation

This test increases in complexity. Remember to stop at the point where a student begins to get the answers wrong and start the Intervention program from the Lesson suggested in the answers below. Check the next few questions to make sure that the problem is genuine, but you do not have to complete the whole test once a student consistently gets answers wrong.

What to look for in a student's answers:

For question 1: The answers are: (a) 6 rem 4   (b) 6 $^4/_5$ or 6 $^8/_{10}$ (c) 6.8
- If your student answered (a) or (b) incorrectly then you need to download and use the diagnostic test from the program "*Fixing Misconceptions in Multiplication and Division*". You can find it here: http://goo.gl/FLPmLg
- If your student answered (c) incorrectly then you need to *start at Lesson 1.*

For question 2:
Acceptable alternative representations include: $1.70, 1.7cm line, a shape to represent 1 and then roughly 7/10 of a second shape that is the same as the first, or one larger shape (to show 1) and smaller shape that is 7/10 the size of the larger shape.

Common Misconceptions include:
- Drawing 1 whole and 7 more wholes. S*tart at Lesson 2.*
- Drawing 1 whole and 7 halves, quarters or eighths. S*tart at Lesson 2.*
- Drawing 1 whole and 7 sevenths. S*tart at Lesson 2.*
- Anything other than 1 whole and 7 tenths. S*tart at Lesson 2.*

For question 3: The answers are   (a) 2.5   (b) 250cm
If the answer to either question is incorrect you need to *start at Lesson 5.*

For question 4: The only correct answers are 12/10 and 1.20
- If your student circled any additional representations, *start at Lesson 6.*
- If your student only circled one of the correct answers, *start at Lesson 8.*

For question 5:
The student should have shaded in the correct amount on each bar. Please note – it is especially important that they have the same amount shaded for 0.2 and for 0.20.
If students have not shaded the correct amounts, *start at Lesson 9.*

For question 6: The answers are   (a) 2.75   (b) 275cm
- If your student answered (a) incorrectly, *start at Lesson 9.*
- If your student answered (b) incorrectly, *start at Lesson 12.*

For question 7: The answers are: (a) 8 $^1/_4$ or 8 $^{25}/_{100}$ (b) 8.25
If students didn't answer this correctly, *start at Lesson 13*.

For question 8: The answers are included in the table below. The grey boxes give the original information.

Decimal Number	Fraction	Rounded to the nearest 0.1	Rounded to the nearest 0.01
0.275	$^{275}/_{1000}$	0.3	0.28
3.453	$^{3453}/_{1000}$	3.5	3.45
2.996	$^{2996}/_{1000}$	3 (or 3.0)	3 (or 3.00)
2.043	$^{2043}/_{1000}$	2 (or 2.0)	2.04

If your student answered any question incorrectly *start at **Lesson 14**.*

For question 9: Here is what you should see, with alternatives provided in brackets.

A dress that normally costs $50 was on sale. The percentage off is shown below. Calculate both:
  a. The discount
  b. The sale price
      Show all of your working out.

Scenario A: 20% discount

Discount:
20% of $50 (or 1/5 of 50)
0.2 x 50 (or 50 ÷ 5)
$10 discount

Sale Price:
Total – discount
$50 - $10
$40 sale price

Alternative:
80% of $50 (or 4/5 of 50)
0.8 x 50 (or 50 ÷ 5 x 4)
$40 sale price

Scenario B: 45% discount

Discount:
45% of $50)
0.45 x 50
$22.50 discount
Note: they may also say "45% of 100 = 45, so divide this by two to get $22.50"

Sale Price:
Total – discount
$50 - $22.50
$27.50 sale price

Alternative:
55% of $50
0.55 x 50
$27.50 sale price

- If your student answered (a) incorrectly you need to *start at **Lesson 17**.*
- If your student answered (b) incorrectly you need to *start at **Lesson 19**.*