

Appendix B

Mathematical Knowledge for Teaching (MKT) Fractions Measure Sample Items

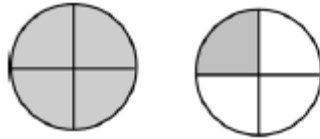
For review purposes, two sample MKT released items are inserted here in their original format from the developer. For study purposes, additional fields will be added for teachers to record their name and school. A field for unique teacher ID number will be added to each page.

The following statements will also appear on the MKT assessment:

Confidentiality

Information collected for this study comes under the confidentiality and data protection requirements of the Institute of Education Sciences (The Education Sciences Reform Act of 2002, Title I, Part E, Section 183). Responses to this data collection will be used only for statistical purposes. The reports prepared for the study will summarize findings across the sample and will not associate responses with a specific district, school, or individual. We will not provide information that identifies you, your district or your school to anyone outside the study team, except as required by law.

5. Mrs. Johnson thinks it is important to vary the whole when she teaches fractions. For example, she might use five dollars to be the whole, or ten students, or a single rectangle. On one particular day, she uses as the whole a picture of two pizzas. What fraction of the two pizzas is she illustrating below? (Mark ONE answer.)



- a) $\frac{5}{4}$
- b) $\frac{5}{3}$
- c) $\frac{5}{8}$
- d) $\frac{1}{4}$

21. Mr. Foster's class is learning to compare and order fractions. While his students know how to compare fractions using common denominators, Mr. Foster also wants them to develop a variety of other intuitive methods.

Which of the following lists of fractions would be best for helping students learn to develop several different strategies for comparing fractions? (Circle ONE answer.)

- a) $\frac{1}{4}$ $\frac{1}{20}$ $\frac{1}{19}$ $\frac{1}{2}$ $\frac{1}{10}$
- b) $\frac{4}{13}$ $\frac{3}{11}$ $\frac{6}{20}$ $\frac{1}{3}$ $\frac{2}{5}$
- c) $\frac{5}{6}$ $\frac{3}{8}$ $\frac{2}{3}$ $\frac{3}{7}$ $\frac{1}{12}$
- d) Any of these would work equally well for this purpose.