EMDI Screening Questions: Grade 7

Green = grade level prompts; Yellow = prior grade level prompts.

1_G7. Compare **Materials:** screening cards, symbols cards

Place a card in front of the student one at a time, along with the symbol cards, and say "Choose the comparison symbol that shows the relationship between these two numbers." Once they placed the symbol ask, "Can you read this for me?" Follow up: "How do you know?"

A. $-\frac{3}{4}$ $-\frac{1}{2}$

B. -2 $-\frac{13}{6}$

C. -4.6 $-4\frac{2}{3}$

Compare (1_G6) **Materials:** screening cards; symbol cards

Place a card in front of the student one at a time, along with the symbol cards, and say, "Choose the comparison symbol that shows the relationship between these two numbers." Once, they placed the symbol ask, "Can you read this for me?" Follow up: "How do you know?"

A. 0 -3

B. -7 -5

C. -4 -4.5

D. $-\frac{1}{2}$ $-\frac{1}{16}$

2_G7. Operations with Rational Numbers **Materials:** screening cards
available: two-color chips, number line

Place a screening card in front of student one at a time, and ask, "What is the answer to this problem?" If needed, follow up: "How did you figure out your answer?" Have optional manipulatives available.

A. -3 + 7

B. $-5 - 1\frac{2}{3}$

C. $\frac{1}{2} - -1\frac{3}{4}$

Fraction Addition & Subtraction Strategies (6_G5)	**Materials:** screening cards available: fraction circles or bars, number lines, grid paper

Place a card in front of the student and ask, “What is the answer to this problem?”
If needed, follow up: “How did you figure out your answer?”

A. $\frac{5}{8} + \frac{3}{12}$

B. $1\frac{4}{5} + 4\frac{1}{4}$

C. $4\frac{1}{2} - 2\frac{1}{3}$

3_G7. Rational Numbers Multiplication/Division	**Materials:** screening cards; available: paper and pencil

Show each card and ask students to use what they know about fraction operations to determine whether the product/quotient is less than or greater than the benchmark, rather than work out an exact answer. If needed, follow up: “How do you know?”

A. $\frac{4}{7} \times -\frac{1}{2}$

“Using what you know about fraction operations, is the product less than $-\frac{1}{2}$ or greater than $-\frac{1}{2}$?”

B. $-\frac{2}{3} \div -\frac{1}{2}$

“Using what you know about fraction operations, is the quotient less than $\frac{2}{3}$ or greater than $-\frac{2}{3}$?”

Estimating Fraction Quotients (6_G6)	**Materials:** screening cards, available paper and pencil

Show each card and ask students to use what they know about fraction operations to determine whether the quotient is less than or greater than the benchmark, rather than work out an exact answer. If needed, follow up: “How do you know?”

A. $\frac{5}{11} \div \frac{3}{4}$

“Using what you know about fraction operations, is the quotient less than 1 or greater than 1?”

B. $2\frac{1}{8} \div \frac{1}{4}$

“Using what you know about fraction operations,, is the quotient less than 4 or greater than 4?”

Estimating Fraction Products and Quotients (7_G5)	**Materials:** screening cards, available paper and pencil

Show each card and ask students to use what they know about fraction operations to determine whether the quotient is less than or greater than the benchmark, rather than work out an exact answer. If needed, follow up: "How do you know?"

A. $2 \times \frac{4}{5}$

"Using what you know about fraction operations, is the product less than $\frac{4}{5}$ or greater than $\frac{4}{5}$?"

B. $\frac{2}{3} \times \frac{9}{10}$

"Using what you know about fraction operations, is the product less than $\frac{9}{10}$ or greater than $\frac{9}{10}$?"

C. $3 \div \frac{1}{8}$

"Using what you know about fraction operations, is the quotient less than 3 or greater than 3?"

4_G7. Percent Problems	**Materials:** screening cards; available: paper and pencil

Place a screening card in front of the student one at a time, and ask, "What is the answer to this problem?" If needed, follow up: "How did you figure out your answer?"

A. What is the total cost? Item $20, Tax Rate 5%
B. What is the sale price? Item $40, Sale 20% off.

Percent of a Quantity (3_G6)	**Materials:** screening cards; available: paper and pencil

Place a screening card in front of student one at a time, and ask, "What is the answer to this problem?" If needed, follow up: "How did you figure out your answer?"

A. What is 5% of 30?
B. 6 is what % of 24?
C. 30% of what is 6?

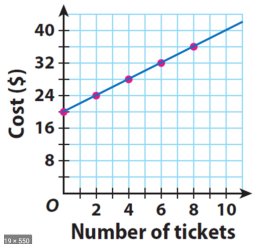
5_G7. Proportional Relationships

Materials: screening cards; available: paper and pencil

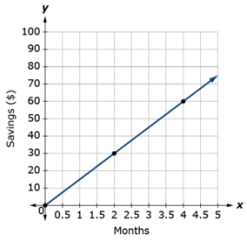
Spread the 6 cards in the set out in front of the student and ask, “Which of these relationships show a proportional relationship between 2 quantities?

A. $3x = y$

B.



C.

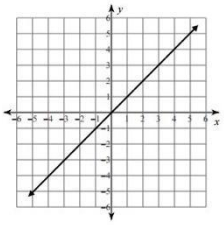


D.

x	y
0	0
4	8
7	14

E. $y = 2x + 5$

F.



Equivalent Ratios (4_G6)

Materials: screening cards; available: paper and pencil

Place a screening card in front of the student one at a time, and ask, “What missing amount will make the ratios equivalent?” If needed, follow up: “How did you figure out your answer?”

A. 4 : 7 = _ : 21

B. 12 : _ = 4 : 3

6_G7. Unit Rates

Materials: screening cards

Place the problem cards in front of the student one at a time, and say, “What is the answer to this problem?” Once, the student responds, ask, “How do you know?”

A. Ana earns $50 in 4 hours. How much does she earn per hour?
B. Jayden earns $36 in 3 hours. Does Ana or Jayden earn more per hour?
C. $56 for 8 pounds of almonds, $77 for 10 pounds of walnuts. Which costs less per pound?

Ratio Word problems (5_G6) **Materials:** screening cards

Place the problem cards in front of the student one at a time, and say, “Which is a better deal?” Once, the student chooses, ask, “How do you know?”

A. $23 for 2 pounds fish, $11 for a pound of fish
B. $7 for 9 pounds of flour, $8 for 10 pounds of flour

7_G7. Algebraic Expressions **Materials:** screening cards

Place the pair of expression cards in front of the student one at a time, and say, “Are these expressions equivalent?” Follow up with, “How do you know?”

A. 3x + 5 + 7x, 10x + 5
B. 4(x - 8), 4x - 8
C. -5(x - 8) + 2, -5x - 38

Algebraic Expressions (7_G6) **Materials:** screening cards

Place the pair of expression cards in front of the student one at a time, and say, “Are these expressions equivalent?” Follow up with, “How do you know?”

A. 3 + 4n + 1 , 8n
B. 2(m + 3) , 2m + 3

8_G7. Word Problems **Materials:** screening cards; available: paper and pencil

Place the word problem card in front of the student and say, “Read the problem on this card.” Next spread the remaining cards in the set out in front of the student and ask,

A. The length of a box is 3 more than twice its width. Let l represent the length of the box and w represent the width of the box. “Choose all of the equations that could represent the given situation.” Follow up: How do you know?

   l − 3 = 2w, l + 3 = 2w, l = 2w + 3, l-3/2 = 2, ½ -3 = w, l = 2(w + 3)

B. A puppy weighed 14 ounces at birth. It gains 2 ounces each week. Let x represent the number of weeks. How much does it weigh after x weeks? “Which of these cards is an equation that could represent the given situation?” Follow up: How do you know?

   y = 14x + 2, y = 2x + 14, x = 2y + 14, y − 14 = 2x, y-14/2 = x, y/2 + 7 = x

Word Problems (8_G6) **Materials:** screening cards; available: paper and pencil

Place the word problem card in front of the student and say, “Read the problem on this card.”

A school group is preparing for a field trip to a science center. There will be 7 times as many students as teachers on the trip.

Next, spread the remaining cards in the set out in front of the student and ask,

A. “Which of these cards is an equation that represents the relationship in the problem?”

   $7s = t$; $t = \frac{1}{7}s$; $7t = s$; $7 = \frac{s}{t}$; $\frac{t}{s} = 7$