

This review set is a selection of problems, but is not representative of everything that will be on the final exam. It is best to review ALL SECTIONS of the text to prepare for the final.

The final exam has 10 multiple-choice questions and 8 open-answer questions.

1.2

My sister can walk from school to home in 40 minutes. I can walk from school to home in 30 minutes. Today I stayed for some extra help and my sister was already $\frac{1}{5}$ of the way home when I started. If I walk at my usual speed, can I catch my sister before she gets home?

- A. Yes, I arrive 8 min. ahead of her.
- B. No, she arrives 8 min. ahead of me.
- C. Yes, I arrive 2 min. ahead of her.
- D. No, she arrives 2 min. ahead of me.
- E. No, she arrives 4 min. ahead of me.

1.4

Cassie spent \$153 on three items. The purse cost half as much as the pair of shoes. The jacket cost three times as much as the shoes. Make a diagram to represent this situation. How much did she spend on each item?

2.4

Use base pieces and the take-away method to show this arithmetic work: $312_{\text{four}} - 133_{\text{four}}$

Clearly show any necessary decomposing.

Drawing of answer:

Number answer: _____

3.1

The Candee Shoppe sells chocolate-covered pretzels, nuts, and raisins. A customer comes in and buys some of all three. The amount of raisins is $\frac{1}{2}$ lb less than the amount of pretzels. The amount of nuts is 2 oz more than the amount of pretzels. How does the amount of nuts compare to the amount of raisins?

- A. $\frac{5}{8}$ lb more nuts than raisins
- B. $\frac{3}{4}$ lb more nuts than raisins
- C. $\frac{5}{8}$ lb less nuts than raisins
- D. $\frac{3}{4}$ lb less nuts than raisins
- E. $\frac{7}{8}$ lb more nuts than raisins

3.5

Determine the division concept used in this word problem.

Arianna wants to show her friends how to make a necklace. She has 30 beads and each necklace requires 5 beads. How many necklaces can her friends make?

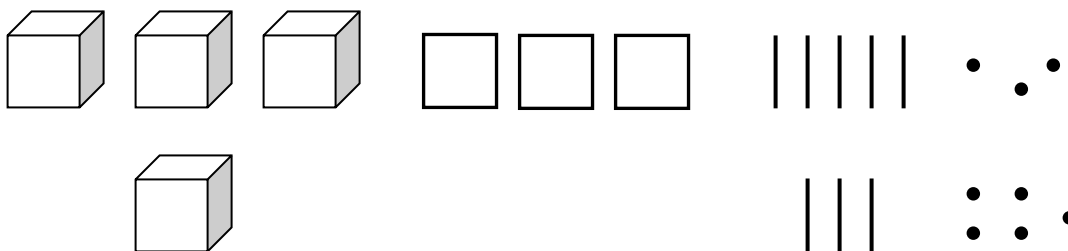
Division concept: _____

Write a new word problem using the same numbers but a different division concept.

Division concept: _____

4.1

Which of the following computations might have led to the block work pictured here?



I) $3353 + 135$

II) $33.53 + 10.35$

III) $335.3 + 103.5$

- A. I only
- B. II only
- C. II and III only
- D. I and III only
- E. I and II only

5.4

Use scientific notation to do the work and express the answers for:

$$(2.5 \times 10^3) \times (5 \times 10^{12})$$

$$(2.5 \times 10^3) \div (5 \times 10^{12})$$

6.3

Write $\frac{14}{5}$ as a decimal and 6.5% as a fraction.

- A. 2.4; $\frac{13}{20}$
- B. 2.8; $\frac{13}{200}$
- C. 1.4; $\frac{13}{200}$
- D. 2.4; $\frac{13}{200}$
- E. 2.8; $\frac{13}{20}$

7.1

You have a recipe that gives $1\frac{3}{4}$ quarts of punch, and an insulated jug that holds $1\frac{1}{4}$ gallons. If you make 3 recipes of the punch, will it all fit in the jug? If so, how much more could fit in the jug? If not, how much punch will be left over?

- A. yes, with room for $\frac{1}{16}$ qt of punch
- B. yes, with room for $\frac{1}{4}$ qt of punch
- C. no, $\frac{1}{4}$ qt of punch left over
- D. no, $\frac{1}{16}$ qt of punch left over
- E. The punch will exactly fill the jug.

7.3

A crocheted Christmas ornament requires $1\frac{1}{3}$ yards of yarn. The ball of yarn has $7\frac{1}{2}$ yards.

How many complete ornaments can be made? _____

Show your work here:

How much yarn is left over? _____ yards

8.2

Tim worked 30 hours last week, which was $\frac{5}{3}$ times as many hours as Robert worked. How many hours did Robert work?

- A. 35
- B. 18
- C. 20
- D. 45
- E. None of the above

9.2

Two workers working 9 hours made 243 parts. Worker A makes 13 parts in one hour.

If the workers work at a steady rate throughout the day, who is more productive, Worker or Worker B? Use word labels to clarify each step of your work.

circle the answer: **A** **B**

10.2

Identify which of the following illustrates the commutative property of addition.

I $6 \cdot (3 + ^{-}4) = (3 + ^{-}4) \cdot 6$ II $6 \cdot (3 + ^{-}4) = 6 \cdot (^{-}4 + 3)$ III $6 + (3 + ^{-}4) = (6 + 3) + ^{-}4$

- A. I only
- B. II only
- C. I and II only
- D. III only
- E. II and III only

10.4

Consider clock arithmetic using a clock with four numbers: 0, 1, 2, and 3. Complete each table.

+	0	1	2	3
0	0	1	2	3
1	1	2		
2	2			
3	3			

×	0	1	2	3
0	0	0	0	0
1	0	1	2	3
2	0			
3	0			

Does 3 have an additive inverse? Circle one: yes no
 If yes, what is it? If not, how do you know?

Does 3 have a multiplicative inverse? Circle one: yes no
 If yes, what is it? If not, how do you know?

11.3

Find all prime numbers between 20 and 40.

- A. 23, 31, 37
- B. 23, 29, 31, 37
- C. 23, 27, 31, 37
- D. 23, 29, 33, 37, 39
- E. 23, 29, 31, 37, 39