

(7 pts)1. 20% of 150 is $\frac{1}{3}$ of : 90

(7 pts)2. Five eighths of an amount is 40. What is the entire amount? 64

(7 pts)3. The pollster noticed that for every 8 men who were in favor of a ballot measure, there were 5 women who were in favor of the measure. According to these figures, if 1200 women were in favor of the measure, how many men were in favor of the measure? 1920

(6 pts)4. Circle each of the following that is close to, or equal to, $\frac{1}{3}$. No explanation is required.

$$\frac{3}{5} \quad \frac{40}{119} \text{ yes} \quad \frac{10^2}{10^6} \quad \frac{175}{301} \quad 0.2_{\text{six}} \text{ yes} \quad \frac{297}{600}$$

(8 pts)5. Emmy wants to read an assigned book in four days. She reads $\frac{2}{3}$ of the book the first day but only $\frac{1}{15}$ of the book the second day and another $\frac{1}{15}$ of the book on the third day.

a. What part of the book must she read the fourth day? 1/5

b. On which day did Emmy read the most? first day

c. If Emmy spent 90 minutes reading on the first day, how many minutes did she spend reading on the second day? 9 minutes

(8 pts)6. Use this rectangle with $\frac{3}{5}$ of the whole shaded to show $\frac{4}{3} \times \frac{3}{5}$.



a. What is the referent unit for $\frac{3}{5}$? whole rectangle

b. What is the referent unit for $\frac{4}{3}$? 3/5

c. What is the product? 4/5

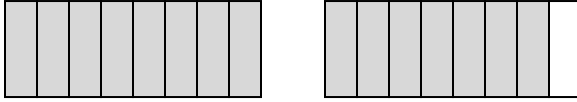
d. What is the referent unit for the product? whole rectangle

(8 pts)7. The canister has $1\frac{7}{8}$ cups of flour. The recipe for apple crisp calls for $\frac{3}{4}$ of a cup of flour.

How many recipes of apple crisp can be made? Assume it is possible to make a portion of a recipe.

Number answer with word label: $2\frac{1}{2}$ recipes

Complete the diagram to illustrate the problem and the answer for question #7.



Name the division concept suggested by question #7: repeated subtraction

(8 pts)8. One medical pill uses 0.2 grams of a certain chemical and 0.6 grams of filler. You have 75 grams of the chemical and 240 grams of filler. How many whole pills can you make?

375 pills

(10 pts)9. *Fill in the blanks with a number or "impossible to determine" as appropriate based on this situation:*

At Riverdale Middle School, $\frac{1}{8}$ of the students are in the band. Two out of every three students in the band are girls.

- The number of boys in the band is $\frac{1}{2}$ times the number of girls in the band.
- What fraction of the students who play in the band are boys? $\frac{1}{3}$
- What fraction of the students at Riverdale are boys who play in the band? $\frac{1}{24}$
- What is the ratio of girls who do not play in the band to the boys who do not play in the band? Impossible to determine
- The number of girls in the band is $\frac{1}{12}$ times the number of students in the school.

(8 pts)10. Jake and Michael have each built a skateboard ramp. Jake's ramp is 2.4 feet high and has a 6 foot base. Michael's ramp has a 9 foot base. How high should Michael's ramp be so that it is exactly as steep as Jake's? Begin your work by making and labeling sketches.

Height of Michael's ramp: $\frac{3.6}{9}$ feet

(6 pts)11. Gala apples are on sale today, at \$1.30 per pound. This is a discount of 30%. What was the cost before the sale? Show your work. Round your answer to the nearest penny.

\$1.86

(8 pts)12. Demonstrate how one could use white (positive) and dark (negative) chips to model these two problems:

Problem	Work shown with chips	Answer shown with chips	Number answer
$4 + (-6)$			-2
$5 - (-2)$			7

(9 pts)13. Which properties does each of the following involve?

$(-2+3)+^{-}5 = (3+^{-}2)+^{-}5$ commutative property – please note spelling

$(-2+3)+^{-}5 = ^{-}5+(^{-}2+3)$ commutative property

$(^{-}2+3)+^{-}5 = ^{-}2+(3+^{-}5)$ associative property