Modeling Percent Problems

Lesson 3-11

DATE TIME

Math Message

1 **a.** Draw pictures, diagrams, or tables to show how you solve the problem below.

In a recent game, the Butler School basketball team took 20 three-point shots.
They made 35% of the shots they took.
How many three-point shots did the team make?

7 shots

35% of 20

.35 · 20

$\frac{35}{100} \cdot \frac{20}{1} = \frac{35}{5} = 7$

b. Explain how you solved Problem 1a. _____

_____

_____

c. How many total points did the team get from three-point shots? 21

d. Draw pictures, diagrams, or tables to show how you solve the problem below.

The team scored a total of 35 points with no free throws.
What percent of the points came from three-point shots? 60%

21	3	60
35	5	100

$\frac{21}{35}$

$35\overline{)21.000}$ = 0.6

-210

0

.6 = 60%

Modeling Percent Problems (continued)

Lesson 3-11

DATE TIME

2 **a.** Draw pictures, diagrams, or tables to show how you solve the problem below.

A length of string that is 240 cm long is cut into 3 pieces.
The second piece is 25% longer than the first piece.
The third piece is 25% shorter than the first piece.
How long is each piece?

1st piece: 80 cm

2nd piece: 100 cm

3rd piece: 60 cm

1	X
2	1.25X
3	.75X

$X + 1.25X + .75X = 240$

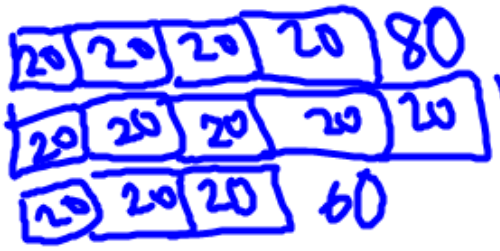
$\frac{3X}{3} = \frac{240}{3}$

$X = 80$

$\frac{3}{1} \cdot \frac{80}{1} = 240$

b. Explain what you did to solve Problem 2a.

c. Solve the problem another way.



$12 \overline{)240}$ 20

d. Explain what you did to solve Problem 2c.

Try This

3 Lisa is stringing beads to make a necklace, an anklet, and a bracelet.
The necklace uses 50% of the string. The anklet is 60% shorter than the necklace.
The bracelet needs 25% less string than the anklet.
How long is the original, uncut string if the bracelet measures 18 cm?

$.75X = 18$

$X = 24$

Math Boxes

Lesson 3-11

DATE TIME

Math Boxes

1 Find the GCF and the LCM for 72 and 54.

GCF (72, 54) = _____

LCM (72, 54) = _____

SRB 105-106

2 The mean number of children in five families is 3.

How many children might be in each family if none of them has 3 children?

_____

SRB 255-258

3 At Brunswick Elementary School, $\frac{2}{5}$ of sixth-grade students have at least one pet. If the school has 181 sixth graders, about how many sixth graders own pets?

Number model: _____

Solution: _____

SRB 189

4 Make an estimate. Then solve.

$15\overline{)544.5}$

Number sentence for estimate:

_____

Answer: _____

SRB 153

5 **Writing/Reasoning** Describe how knowing about mean as a balance point might help you solve Problem 2.