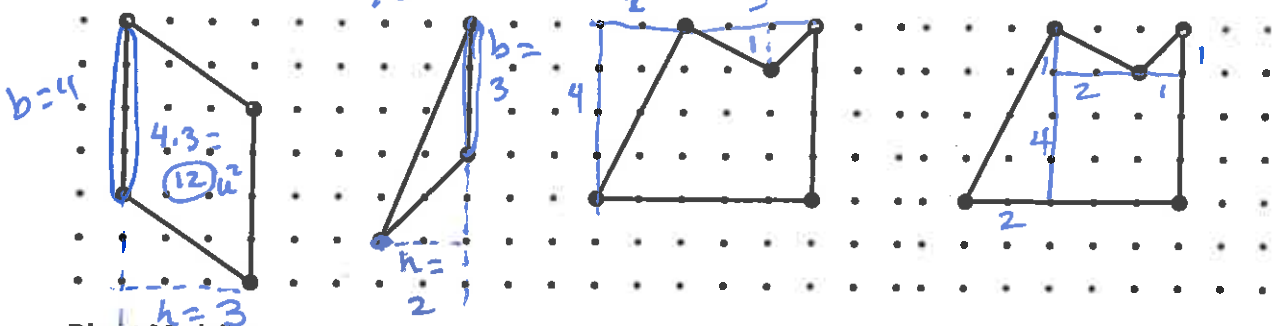
Geoboard areas

Find the areas:



□ = 4·5 = 20

▽ = ½·4·2 = 4 → 20 − 4 − 1.5 = 14.5

½·3·2 = 3 u²

▽ = ½·3·1 = 1.5

△ = ½·4·2 = 4

◺ = ½·2·1 = 1

◿ = ½·1·1 = .5

□ = 3·3 = 9

9 + 4 + 1 + .5 = 14.5

Direct Modeling

Direct model each problem:

a	Sarah had 8 origami frogs. She made 3 more origami frogs. How many origami frogs does she have now?	b	Mark had 14 crackers. He ate 9 crackers. How many crackers does he have left?
c	Walter has 8 shiny rocks in his collection. How many more shiny rocks will he have to find to have 12 shiny rocks?	d	Amanda has 9 red marbles and 6 blue marbles. How many more red marbles than blue marbles does she have?
e	A pack of juice boxes has 8 boxes in it. How many juice boxes are in 6 packs?	f	6 friends share 42 candy bars. How many candy bars does each friend get?
g	A snail crawls 4 feet in an hour. How long does it take for the snail to go 20 feet?		

3 **Venn diagrams with shapes**

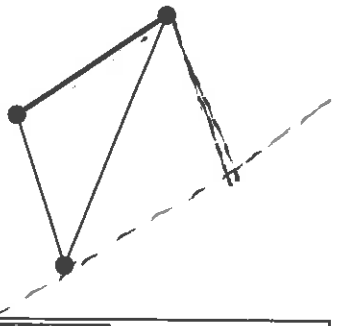
Make a Venn diagram showing all of the special quadrilaterals

4 **Explaining the addition and subtraction algorithms**

Explain using manipulatives and the standard algorithm: 403 – 174

5 **Making a parallelogram from triangles**

Make a parallelogram from 2 copies of the triangle to the right



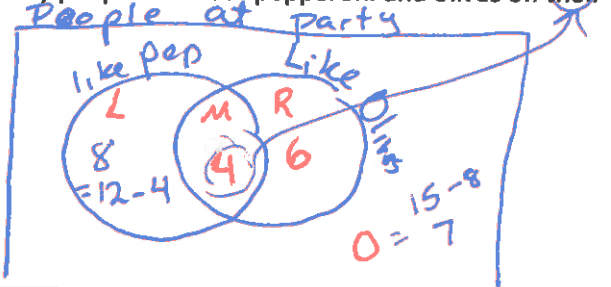
6a **Word problems with Venn diagrams**

Of the 25 people at the party:

- 18 like pepperoni or olives on their pizza L+M+R
- 12 like pepperoni pizza L+M
- 15 people do not like olives L+O

How many people like both pepperoni and olives on their pizza?

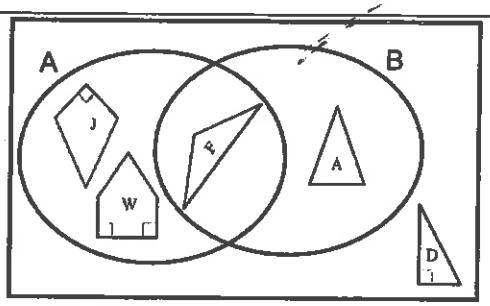
18 − 2 = 6 = R



Like olives = 25 − 15 = 10

So M = 4

6b



Which of these could be a definition for set A (explain)

a) shapes with at least one pair of equal sides
b) shapes with at least two pairs of equal sides
c) shapes with an obtuse angle
d) shapes with a right angle

7 **Scaffolding division**

Solve 1732 ÷ 7 using scaffolding division and a tape diagram.

Direct Modeling : Act out

a.
- Put out 8 counters
- Put out 3 more
- Count all of them : 11

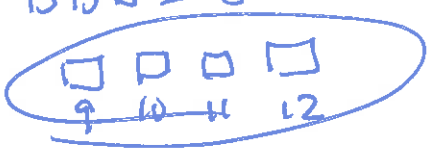
(Join all) (JRW)

b.
- Put out 14 counters
- Take away 9 counters
- Count how many left.

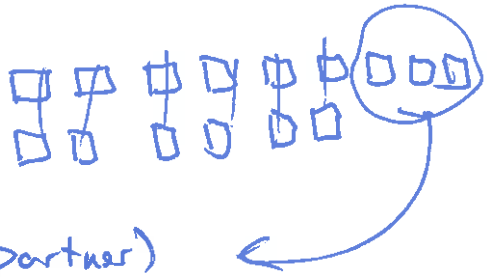
(Separate from) (SRU)

c.
- Put out 8 count counters
- Put out more (in a separate pile) and count on to 12
- Count the added counters

Join To



d.
- Put out 9 counters
- In another pile put out 6 counters
- Line up / matching up counters in the 2 pile
- Count up ones with no match (partner)



e. • put out 8 counters in one pile
• repeat that until I have 6 piles, with 8 in each
• count all of the counters

OR

Put out 6 counters counters for the 6 packs.

Put 8 counters with each pack

count all of the juice-box counters

f. • Put out 42 counters
• Decide on 6 groups (draw circles or 6 counters! one for each friend)
• Deal one counter to each group until you use all 42 counters.
• Count the counters in 1 group.

g. Put out a group of 4
and another group
Count on as you make groups of 4
stop when you have 20 counters.
→ Count number of groups.

403
−174

Put out total:
403

$\begin{array}{r} {}^{3}\not{4}\,{}^{10}\not{0}\,3 \\ -\ 1\ 7\ 4 \\ \hline \end{array}$

Need more ones and tens:

Trade 100 for 10 tens

→ 3 hundreds now
→ 10 tens now
] write

$\begin{array}{r} {}^{3}\not{4}\,{}^{9}\not{0}\,{}^{13}\not{3} \\ -\ 1\ 7\ 4 \\ \hline \end{array}$

Trade a 10 for 10 ones:

Now I have
9 tens
and 13 ones
] write in numbers

$\begin{array}{r} {}^{3}\not{4}\,{}^{9}\not{0}\,{}^{13}\not{3} \\ -\ 1\ 7\ 4 \\ \hline 9 \end{array}$

Take away 4 from 13.
I have 9 ones left
Write it in answer

$\begin{array}{r} {}^{3}\not{4}\,{}^{9}\not{0}\,{}^{13}\not{3} \\ -\ 1\ 7\ 4 \\ \hline 2\ 9 \end{array}$

Take away 7 tens from 9 tens
I have 2 tens] write left

Take away 100 from 300
I have 200 left] write