Summer Math Review Packet

Entering 2nd Grade

Name:_____

Schools of the Sacred Heart San Francisco
Summer Math Review Packet

Keeping math skills sharp: Summer should be a time for fun, relaxation and family time. However, intentional practice of math skills has been shown to be helpful for student retention of topics learned during the school year. This packet is designed to review some essential skills/concepts and to ensure a smooth transition back to school. ***Students DO NOT need to complete the full packet.***

Student Accountability: Students are expected to complete **20 one-sided pages (but ideally more).** Our goal is for students to spend **30 minutes a week** over the summer engaging with mathematics. At the end of some packets, there is an optional challenge section. Your child may choose to replace pages covering basic facts with the challenge options if he/she has truly mastered the skipped content. Please have your child return their packet to their new homeroom teacher at the beginning of the school year.

What parents can do to support their child:

- Make a practice plan and help your child set goals in order to complete the required work by the start of the school year. Your child's packet may have more pages than needed so feel free to choose! Spacing the practice throughout the summer will be more effective in terms of keeping skill sets in place.

- Establish a place where your child can work without distractions and encourage independence when appropriate.

If you are interested in additional enrichment, games, etc. for your child this summer, take a look at the ideas below:

Math Board Games, Apps, Books and Summer Camps

Qwirkle
Big Brain Academy
Bendomino
Mastermind
Flip 4
Make 7
Rush Hour
Equate
MadMath
Ken-Ken/Sudoku/Inkies
Double Shutter
YamSlam
Pentago
Bump (The Sneaky Number Game)
Blokus
Set/Set Cubed
Chocolate Fix
Q Bitz
Chess
Ticket To Ride
Battleship
Puzzles!!

Prime Climb
SMATH (like Scrabble but with equations)
Dominoes
Catan
Catan Jr.
PayDay
Monopoly
Exact Change
Sorry
Legos
Connect Four
Uno
Fishing for 10
Spot it
Chutes and Ladders
Guess Who

Math Websites

Math Stories -- www.mathstories.com
NRICH -- https://nrich.maths.org/9086
A Plus Math -- www.aplusmath.com
Math Playground -- www.mathplayground.com
Fun Brain -- www.funbrain.com
AAA Math -- www.aaamath.com

Cool Math -- www.coolmath4kids.com
Mensa --- www.mensaforkids.com
Fun --- www.fun4thebrain.com
Cyber Games - http://pbskids.org/cyberchase
Youcubed - http://youcubed.org
Beast Academy - https://beastacademy.com/books

Bridges Program Family Math Games -
https://sites.google.com/mathlearningcenter.org/math-at-home/family-games

IXL (Students have used this app in class to practice various skills and have their own personalized log in.)

DragonBox - https://dragonbox.com/

Links to math workbooks (some to purchase) and websites

https://www.amazon.com/Challenging-Problems-Grade-Primary-Mathematics/dp/9812855335/ref=sr_1_3?dchild=1&keywords=challenging+word+problems+grade+5&qid=1619836744&s=books&sr=1-3
(Link is to the fifth grade book but this publisher has books for grades 1-6)

https://www.aimsedu.org/current-projects/puzzle-corner/ (AIMS has very high-quality books/activities)

http://www.kenkenpuzzle.com/store/books (kids love Ken Ken puzzles and you can purchase books or play for free online)

https://nrich.maths.org/primary (Educator website with incredible activities that parents can use too)

http://teacher.scholastic.com/maven/index.htm (math mysteries to solve - lots of reading involved)

https://www.youcubed.org/ (incredible math programming from Youcubed at Stanford)

https://beastacademy.com/books (enrichment math)

http://www.puzzlechoice.com/pc/Number_Puzzlex.html

https://mathpickle.com/puzzles-and-games/

https://edshelf.com/tool/connect-sums/

https://www.commonsensemedia.org/lists/best-math-games-and-apps-for-kids

36 Math Apps For Elementary School Students - (math apps for ipads)

https://www.brookline.k12.ma.us/site/Default.aspx?PageID=2222

https://www.prufrock.com/At-Home-Student-Activities.aspx (this just in from Prufrock Press - great publisher for challenging activities) (FREE)

https://www.noetic-learning.com/pow.jsp (problem of the week)

https://wideopenschool.org/?j=7723549&sfmc_sub=170772299&l=2048712_HTML&u=144169164&mid=6409703&jb=1089&utm_source=WOS_announcement_20200331&utm_medium=email

Math < PreK-5 < Educator

https://www.eaieducation.com/category/599_1/The_STEM_Den.aspx?utm_source=EAI+Education+Newsletter&utm_campaign=84ec9a92dc-EMAIL_CAMPAIGN_2020_04_21_09_01&utm_medium=email&utm_term=0_2057022af5-84ec9a92dc-54362033&mc_cid=84ec9a92dc&mc_eid=9198f11156 STEM Projects

Math at Home - Family Games

https://www.mindware.orientaltrading.com/web/search/searchMain?keyword=books+math

https://mashupmath.com/shop/101c (algebra puzzles - favorite)

https://mathathome.mathlearningcenter.org/activities-of-the-day Bridges Math - games, daily activities, practice pages from Bridges workbook

https://www.amazon.com/s?k=summer+bridge+activities+4-5&crid=560BMDVOTYO1&sprefix=summer+bridge%2Caps%2C264&ref=nb_sb_ss_i_5_13

https://www.amazon.com/Summer-Blast-Getting-Ready-Fifth/dp/1425815553/ref=sr_1_3?dchild=1&keywords=summer+blast&qid=1591643536&sr=8-3

https://virtual.aopsacademy.org/?utm_source=nagc&utm_medium=email&utm_campaign=Virtual_Academy_Summer_Camps (virtual math/language arts camps)

Summer Math/Enrichment Camps (check if virtual or in-person)

https://www.sacredsf.org/the-experience/summer-program

https://atdp.berkeley.edu/

https://www.nuevaschool.org/enrichment/nueva-summer

https://spcs.stanford.edu/programs

https://astrocampsummer.org/

http://www.tinkeringschool.com/day-camp

https://epsiloncamp.org/

https://www.sfmathcircle.org/

https://artofproblemsolving.com/wiki/index.php/Mathematics_summer_program

https://cty.jhu.edu/summer/grades2-6/

Math Games

Math games are a great way for your daughter to engage with the concepts in a fun way. The following math games reinforce the math concepts that have been taught this year.

Partners to Tens: To play this game you will need a deck of cards with the Jacks, Kings & Jokers removed from the deck. The Aces will stand for 1 and the Queens will stand for 0. The objective of the game is to collect partners to ten. Each player is dealt 7 cards, the remaining cards will be the drawing cards, or "fishing cards". Players ask each other for cards that will help them complete a partner to ten. For example, if I have a 2 in my hand I would ask if my opponent has a 8. If he/she does then they would give it to me, if not I would draw a card from the "fishing cards". The game continues until there are no cards remaining.

Forehead Facts: To play this game you will need a deck of cards and three players with all of the face cards (Jacks, Queens, Kings, & Jokers) removed from the deck. One player will be the dealer and the other two players will be the forehead card holders. The dealer will then give each player one card. Without looking at the card, the player places the card on their forehead with the number facing out. The dealer looks at both of the cards and finds the sum of the two cards. Using the sum and the other players' card, each player tries to figure out the card that is on their head. The roles change after each round.

Addition (Two Card Draw!) To play this game you will need a deck of cards. Remove all of the face cards (Jacks, Queens, Kings, & Jokers). Shuffle the cards and deal out the entire deck. Players keep cards face down and count 1,2,3 and flip two cards over at the same time. Players add together the numbers on their cards to find the sum. The player whose sum is larger, takes the cards for that round. If there is a tie, players each put 3 cards down and turn over 2 more to find the new sum. The winner of the tie takes all of the cards for that round. The game continues until one player has all of the cards.

***Challenge: Three Card Draw!**
Use the same card deck as you would for Two Card Draw!
Strategies for adding three cards:
- First, add two cards for a total. Then add the remaining card to find the total sum.
- Look for partners to ten. If you have partners to 10, then just add the third card to 10.

Rolling for $1.00 or $2.00: To play this game you will need a die and a bag of coins (pennies, nickels, dimes & quarters). To begin, all of the coins will be the bank and as you roll the die you take that amount of money out of the bank. For example, if I roll a 5 I will take out $0.05. As the game continues, players are to make trades or exchanges for fewer coins. For example, if I have 10 pennies I could trade for 1 dime. The goal is to use the fewest coins to show an amount of money. The game continues until $1.00 or $2.00 is made.

Summer Math Resource Packet

Go Fish: Kindergarten
To play this game, remove all face cards from a deck. Each player is dealt 7 cards, the remaining cards will be the drawing cards, or "fishing cards". Players ask each other for cards that will help them complete pair. For example, if I have a 3, I would ask my opponent for a 3. If he/she has the card, the card would be handed to me to complete a double. If not, I would draw a card from the "fishing cards". The game continues until there are no cards remaining.

Fishing for Tens: 1st grade
To play this game you will need a deck of cards with the Jacks, Kings & Jokers removed from the deck. The Aces will stand for 1 and the Queens will stand for 0. The objective of the game is to collect partners to ten. Each player is dealt 7 cards, the remaining cards will be the drawing cards, or "fishing cards". Players ask each other for cards that will help them complete a partner to ten. For example, if I have a 2 in my hand I would ask if my opponent has a 8. If he/she does then they would give it to me, if not I would draw a card from the "fishing cards". The game continues until there are no cards remaining.

Forehead Facts: 1st, 2nd, 3rd, 4th grades
To play this game you will need a deck of cards and three players with all of the face cards (Jacks, Queens, Kings, & Jokers) removed from the deck. One player will be the dealer and the other two players will be the forehead card holders. The dealer will then give each player one card. Without looking at the card, the player places the card on their forehead with the number facing out. The dealer looks at both of the cards and finds the sum of the two cards. Using the sum and the other players' card, each player tries to figure out the card that is on their head. The roles change after each round.
Variations: Play by finding the difference between the two cards, and the players have to determine the subtrahend and minuend. Play by finding the product of the two cards, and the players have to determine the factors.

Addition War: 1st, 2nd, 3rd, 4th grades
To play this game you will need a deck of cards. Remove all of the face cards (Jacks, Queens, Kings, & Jokers). Shuffle the cards and deal out the entire deck. Players keep cards face down and count 1,2,3 and flip two cards over at the same time. Players add together the numbers on their cards to find the sum. The player whose sum is larger, takes the cards for that round. If there is a tie, players each put 3 cards down and turn over 2 more to find the new sum. The winner of the tie takes all of the cards for that round. The game continues until one player has all of the cards.
Variation: Subtraction War and Multiplication War (2nd, 3rd, 4th)

Rolling for $1.00 or $2.00: 1st, 2nd, 3rd, 4th
To play this game you will need a die and a bag of coins (pennies, nickels, dimes & quarters). To begin, all of the coins will be the bank and as you roll the die you take that amount of money out of the bank. For example, if I roll a 5 I will take out $0.05. As the game continues, players are to make trades or exchanges for fewer coins. For example, if I have 10 pennies I could trade for 1 dime. The goal is to use the fewest coins to show an amount of money. The game continues until $1.00 or $2.00 is made.

Top It: Kindergarten, 1st grades
To play this game you may use Top It cards, domino cards or a deck of cards (with all face cards removed). All of the cards are dealt out face down among the two players. The players then say "1,2,3 Top It" and each turn over a card. The player with the higher card wins the round and takes the cards. If you are playing with dominoes add up the total amount of dots and the player with the highest sum wins the round. The game continues until one player has all of the cards.
Variation Top-it (place value) 1st, 2nd, 3rd, 4th grades
Students play the same as above except each player turns over 2-6 of their cards. They then create the largest (or smallest) number that they can using the digits they turned over. The winner takes all of the cards and adds them to their pile.

Time Match: 1st, 2nd grades
Use analog clock and digital clock times cards provided by teachers to play Memory, or simply match up the cards.

Make a Number (place value) 2nd, 3rd, 4th grades
Each player draws 4-6 short horizontal lines on a piece of paper. Each of the horizontal lines represents a place value. The line on the right represents the ones place, the one next to it represents the tens place, etc.
Player 1 then rolls the die and writes the number on one of their lines. Player 2 then rolls and chooses where to write their number. Players continue to take turns until all the spaces are filled.
The goal is to create the largest number possible and depending on the number that is rolled, the player decides which space to write the number.
The player with the highest number is the winner.

Quick Stop Card Game (addition or subtraction regrouping, place value) 2nd, 3rd, 4th grades
For addition, start by turning over one card and writing the number down on a piece of paper
Proceed to flip over cards and add up their values on the paper

Keep playing until someone gets to 100 (or you can pick a higher number!)
For subtraction, you do the same thing except start with a number such as 99 (or higher) and subtract the numbers on the cards until someone gets down to zero
You can also play this by rolling a die to produce a number rather than flipping over cards.

Pico Fermi Bagel (place value) 2nd, 3rd, 4th grades
One player thinks of a three or four-digit number (or higher) and writes it on a separate piece of paper. To set up the game, this player also writes one line to stand for each place in the chosen number and writes the numbers zero through nine consecutively on the board (to cross off as guessed). The other player then guesses a number. The first player goes through each digit and tells them whether it was accurate using the following words:
Pico indicates that the digit in the guessed number is correct but is in the wrong place.
Fermi signifies that a digit is correct and in the right position.
Bagel means that the digit is not in the number at all. For example, if the number is 284 and the guess is 698, the player would say "bagel, bagel, pico."
The other player can then strategize that the number has an 8 but not in the ones place. If the next guess is 182, the player will say "bagel, fermi, pico." The play continues until the number is guessed correctly.
Board set-up before play:
0 1 2 3 4 5 6 7 8 9
___ ___, ___ ___ ___

I'm the Greatest Card Game (addition, place value, regrouping) 2nd, 3rd, 4th grades
Shuffle a deck of cards (with the face cards and 10's removed)
Deal each player 6 cards
Each player uses their cards to create two 3-digit numbers that when added together will produce the largest sum possible
The players each add up the 3-digit numbers they have created, to find the sum
The player with the largest sum wins the round and gets a point.
The first player with 5 points wins the game
Example: A player gets the cards 5, 3, 7, 2, 5, and 6. They might want to create the numbers such as 755 and 632 to add for a sum of 1,387. They would compare this sum with other sums of the other players to see whose was the largest.

Double Down (doubles) 1st, 2nd grades
What they'll practice: Adding doubles
What they'll need: Two dice, one piece of paper, and one pencil per student
How to play: In pairs, time students so that each round of play lasts five minutes. When you say, "Roll 'em!" everyone rolls their two dice simultaneously. Anytime someone rolls doubles, they say, "Double Down!" Both students in that pair should stop rolling, then add the value of the dice, and record the sum under the player's name who rolled it. As play continues, students keep track of both sets of scores. Whoever has the most points at the end of five minutes wins.

Circle the doubles facts and then write the answer to the circled facts!

$4+7=$

$$\begin{array}{r} 8 \\ +\ 8 \\ \hline \end{array}$$

$7+7=$

$$\begin{array}{r} 5 \\ +\ 6 \\ \hline \end{array}$$

$$\begin{array}{r} 12 \\ +\ 12 \\ \hline \end{array}$$

$3+6=$

$$\begin{array}{r} 11 \\ +\ 11 \\ \hline \end{array}$$

$$\begin{array}{r} 12 \\ +\ 13 \\ \hline \end{array}$$

$6+6=$

$8+6=$

$3+3=$

$10+5=$

Circle the "neighbor" facts below and write the answer to the circled facts.

$7+8=$

$5+6=$

$$\begin{array}{r} 4 \\ +\ 4 \\ \hline \end{array}$$

$9+8=$

$$\begin{array}{r} 4 \\ +\ 3 \\ \hline \end{array}$$

$$\begin{array}{r} 7 \\ +\ 6 \\ \hline \end{array}$$

$6+6=$

$4+6=$

$12+11=$

Add the number strings below.
(Find tens)

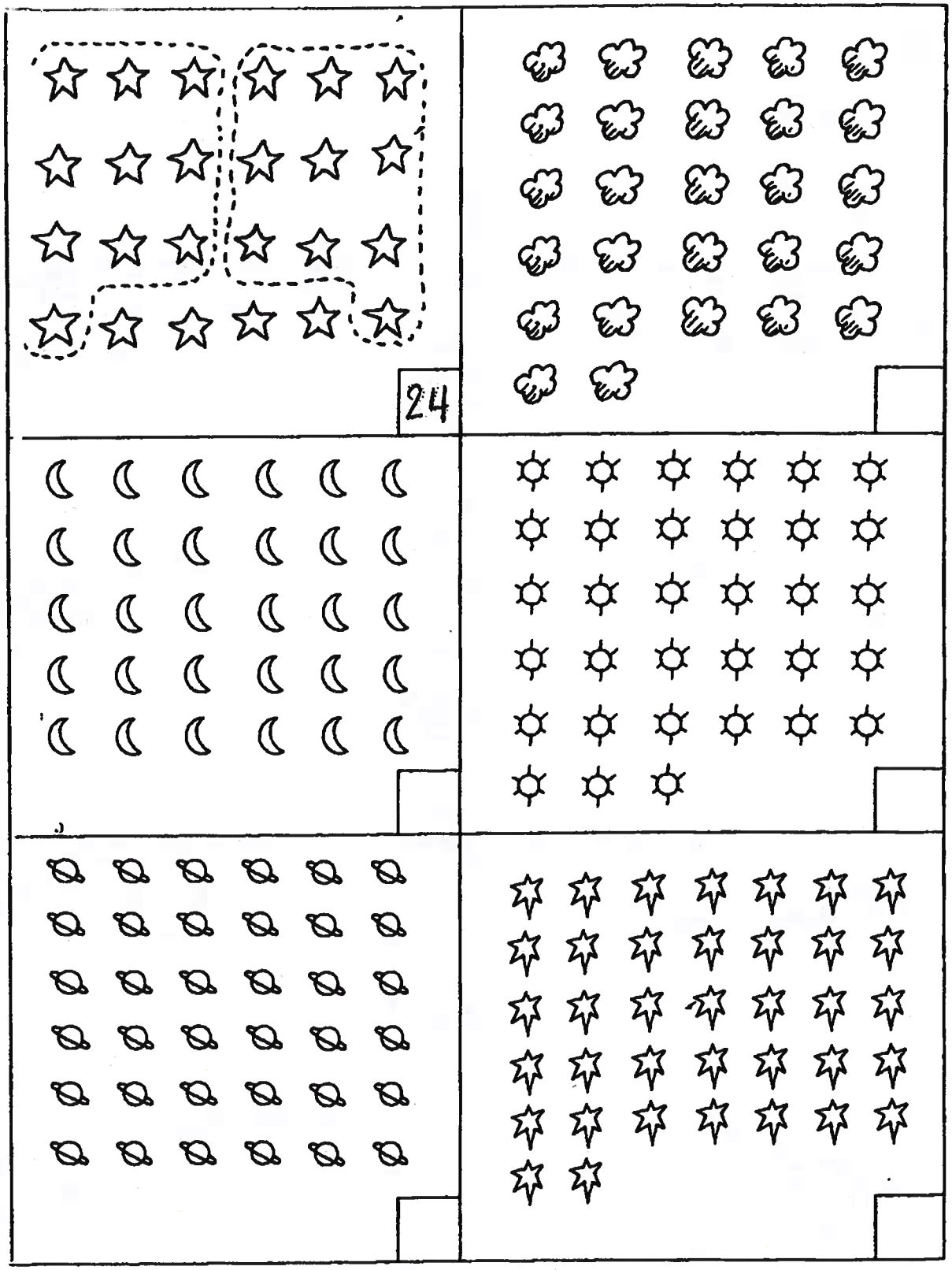
8 + 4 + 6 + 2 + 9 + 1 = _____

6 + 3 + 4 + 2 + 5 = _____

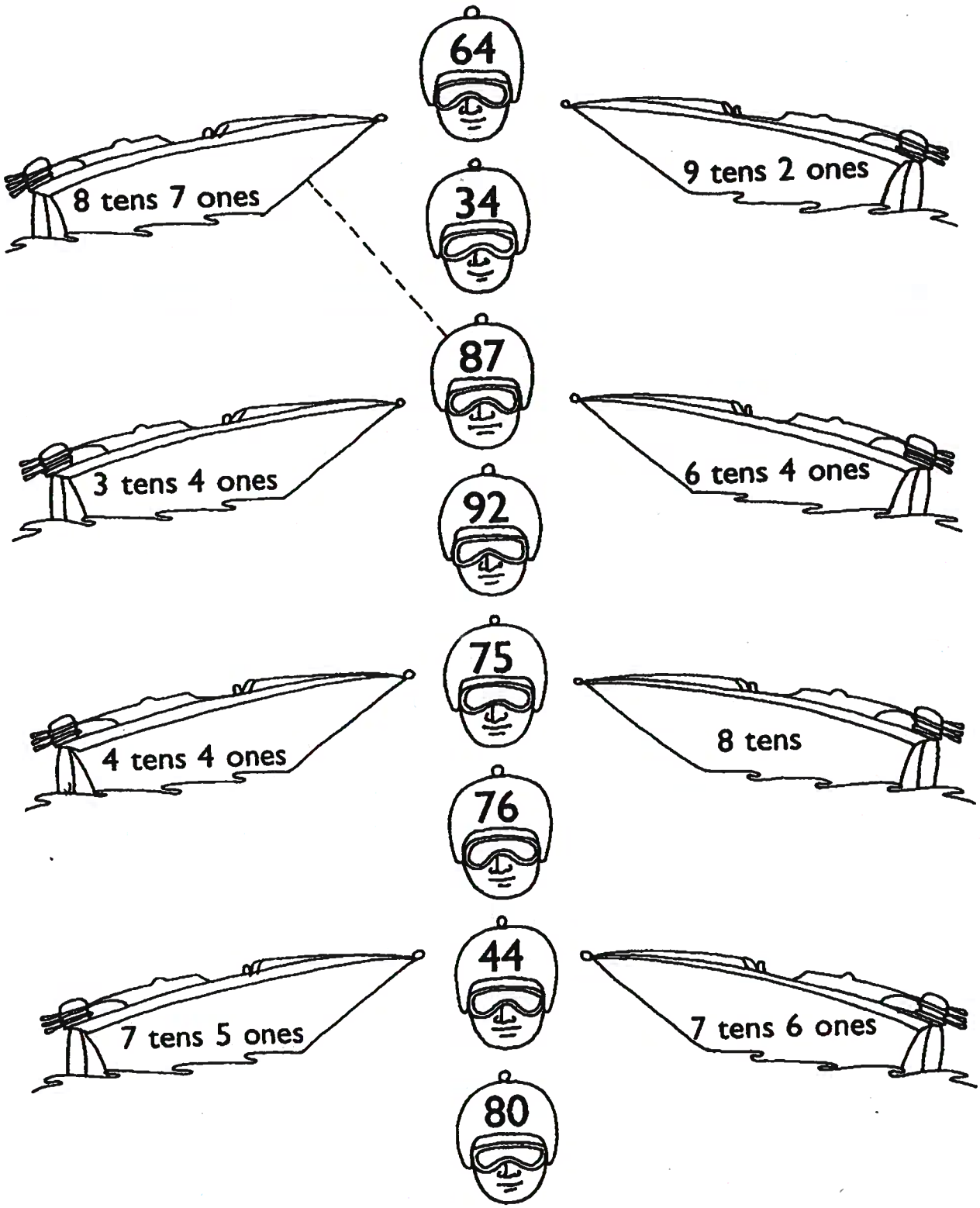
12 + 2 + 8 + 6 + 4 + 20 = _____

4 + 5 + 4 + 5 + 3 + 7 = _____

Circle groups of 10. Then count and write the number.



Match.


64
34
87
92
75
76
44
80
8 tens 7 ones
9 tens 2 ones
3 tens 4 ones
6 tens 4 ones
4 tens 4 ones
8 tens
7 tens 5 ones
7 tens 6 ones

Add the number strings below:

$14 + 6 + 2 + 7 + 3 + 8 + 20 =$ _____

$8 + 6 + 4 + 3 + 2 + 17 + 5 =$ _____

$9 + 2 + 9 + 4 + 5 + 6 + 12 =$ _____

Harry has 32 stickers. His brother gives him 15 more stickers. How many stickers does Harry have now?

Ms. Welday has 3 dimes and 4 nickels in her pocket. She has 1 quarter and 6 pennies in her purse. Does she have enough money to buy a cookie at the bake sale if cookies cost 50 cents each?

FACT PRACTICE

6 + 6 = _____

7 + 7 = _____

4 + 5 = _____

8 + 3 = _____

9 + 3 = _____

3 + 5 = _____

7 + 6 = _____

8 + 9 = _____

5 + 7 = _____

4 + 8 = _____

4 + 9 = _____

5 + 8 = _____

Fact Practice

10 - 8 = _____

12 - 6 = _____

7 - 5 = _____

8 - 3 = _____

12 - 4 = _____

11 - 6 = _____

9 - 6 = _____

12 - 7 = _____

8 - 6 = _____

9 - 3 = _____

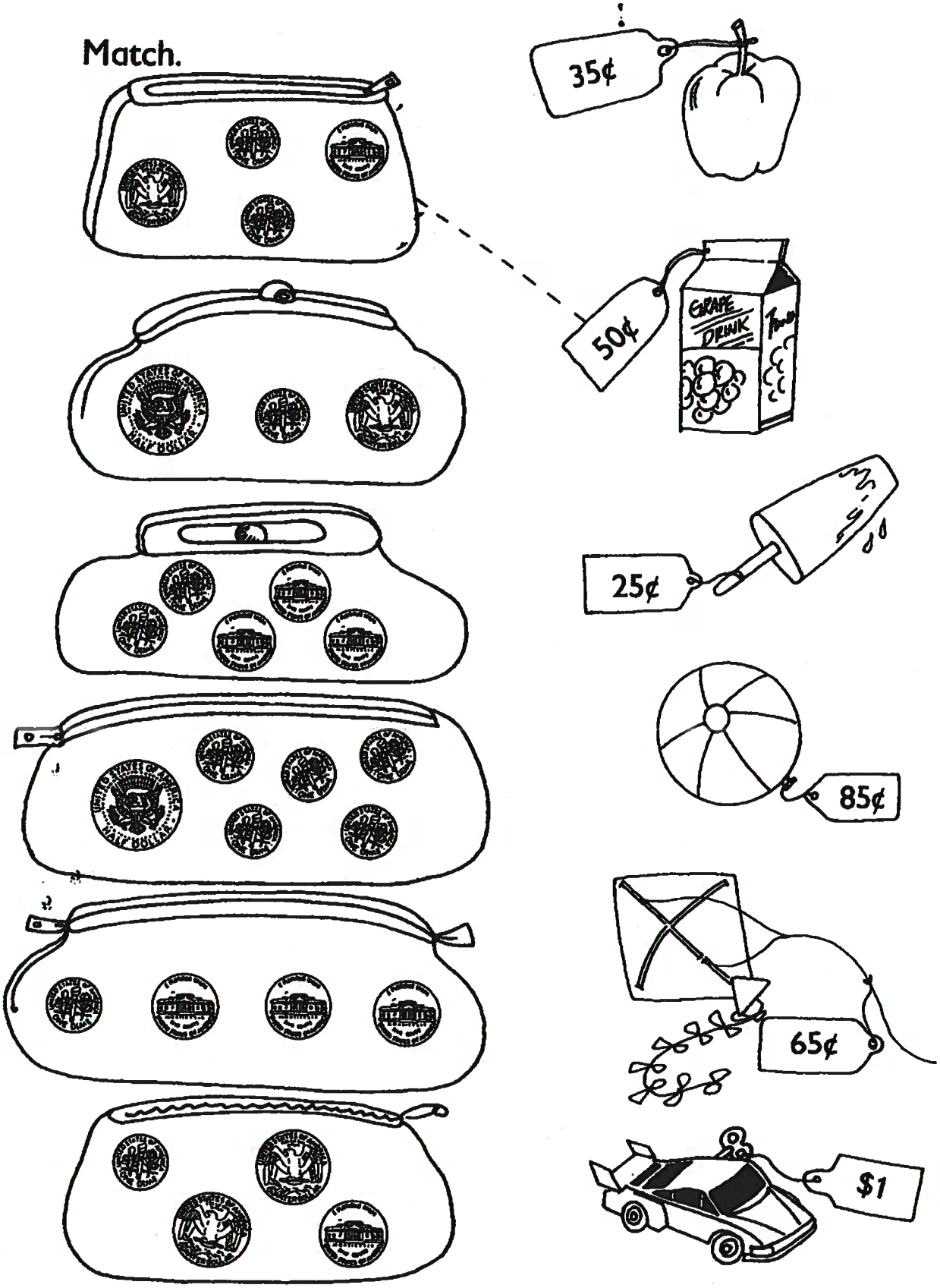
11 - 2 = _____

11 - 4 = _____

11 - 8 = _____

12 - 3 = _____

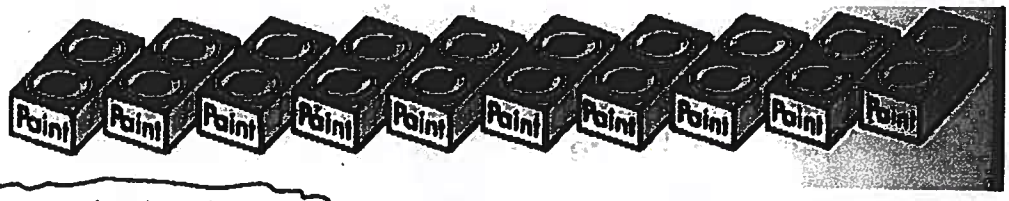
Match.



Preston has 5 toy cars. He wants to replace all the wheels with new extra fast rubber wheels. The new wheels cost $1 each. How much money does Preston need for new wheels?

Brody's family went for a walk after dinner. There were 3 people and 2 dogs on the walk. They all stepped in a huge puddle. How many wet feet (and paws) are on the walk ?

How many cans of paint are in the picture below? _____



Optional Challenge

If each can costs $3.50 and James buys 4 cans of paint using a $20 bill, how much money will he have left?

Algebra Challenge: Find the value of ♥

If 4 + 8 + 2 + ♥ = 20 then ♥ = _____

If 25 + 25 + ♥ = 60 then ♥ = _____

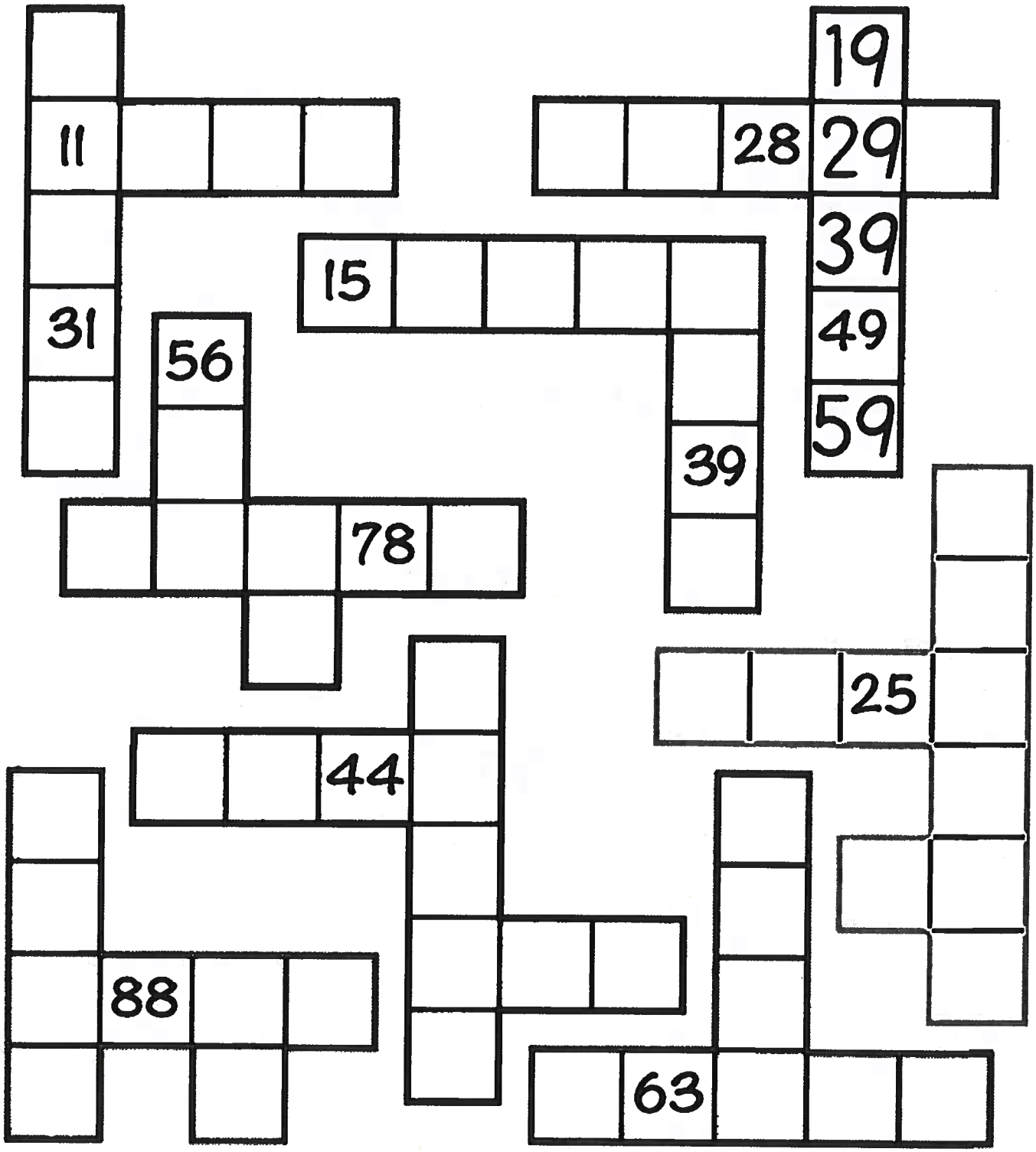
If ♥ + 12 + 12 = 30 then ♥ = _____

If 12 - ♥ = 5 then ♥ = _____

If 16 + 8 + 4 + ♥ = 15 + 15 then ♥ = _____

Hundreds of Pieces!

Use your knowledge of the hundreds chart to fill in the empty boxes on the puzzle pieces below!



Optional

Challenge

Section

Joining Neighbors I

Use the dot patterns that are next to each other to make the sums shown.
The first one is done for you.

6

9

7

11

8

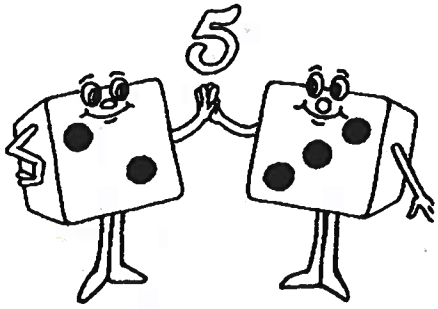
10

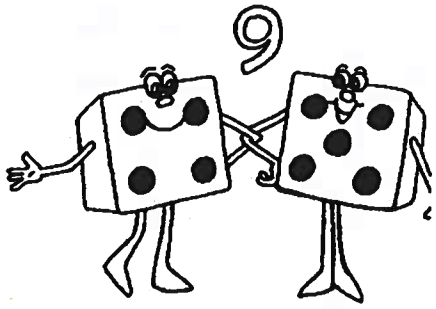
12

9

11

12





Searching for 30

Find three in a row that equal 30. One is done as an example.

14	6	10	7	15
5	13	6	11	6
7	9	14	7	9
15	8	8	12	10

Search Results

5-6 Good

7-8 Great!

9-10 Terrific!!

11 Wow!!!

Record your findings.

Across

14 + 6 + 10 = 30

____ + ____ + ____ = 30

____ + ____ + ____ = 30

____ + ____ + ____ = 30

____ + ____ + ____ = 30

Down

____ + ____ + ____ = 30

____ + ____ + ____ = 30

____ + ____ + ____ = 30

____ + ____ + ____ = 30

Diagonals

____ + ____ + ____ = 30

____ + ____ + ____ = 30

____ + ____ + ____ = 30

____ + ____ + ____ = 30

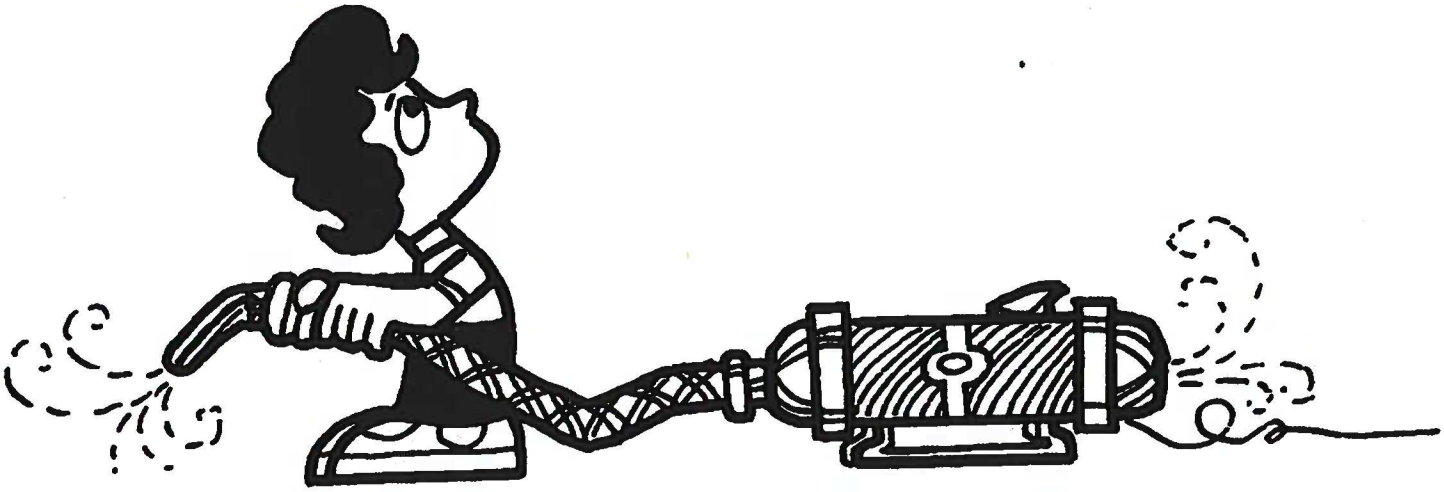
I think of a number.
It is between 30 and 99.
The 2nd digit is 3 times the 1st digit.
What is the number? Write the digits of the number in the boxes.

I am more than 432 – 415.
I am less than 7 x 3.
What number am I?
Circle the correct number.

23 15
19 21
16

You have less than 12 pens.
You can divide them into 2 groups exactly.
You can also divide them into 3 groups exactly.
How many pens do you have?

Jobs	Pay
Washing Dishes	30¢
Cleaning Bedroom	45¢
Dusting Furniture	50¢
Setting Table	15¢
Pulling Weeds	55¢



1. Which two jobs pay a total of 80¢?

   _____ and _____

2. Which two jobs pay a total of 70¢?

   _____ and _____

3. Ellen earned 65¢. Her jobs were

   _____ and _____.

4. Max earned 85¢. His jobs were

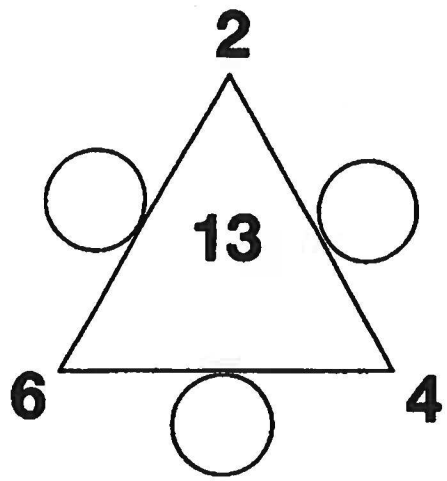
   _____ and _____.

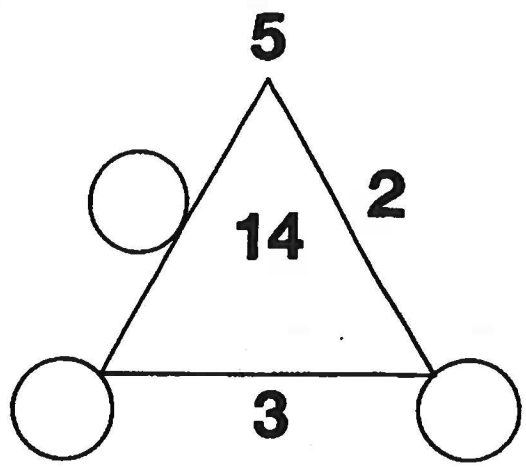
5. Denny earned 95¢. His jobs were washing dishes, _____, and _____.

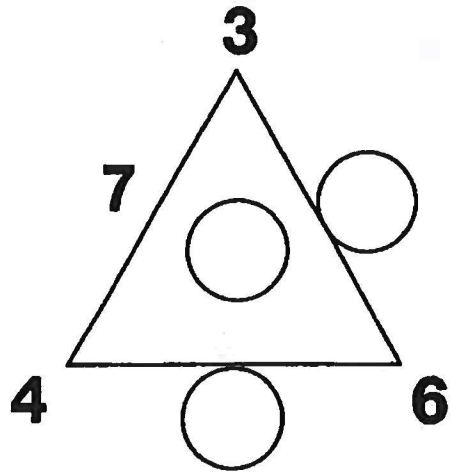
6. Pam earned 90¢. Her jobs were _____, _____, and _____.

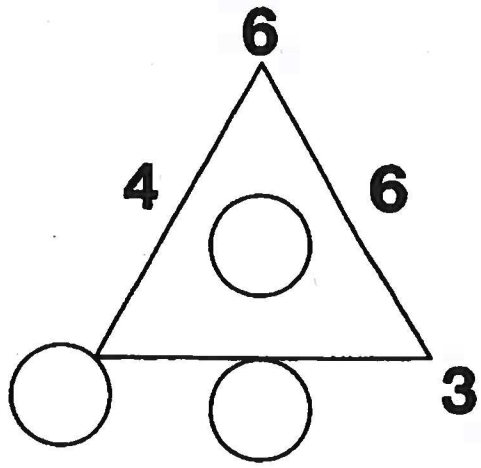
Sum Triangles

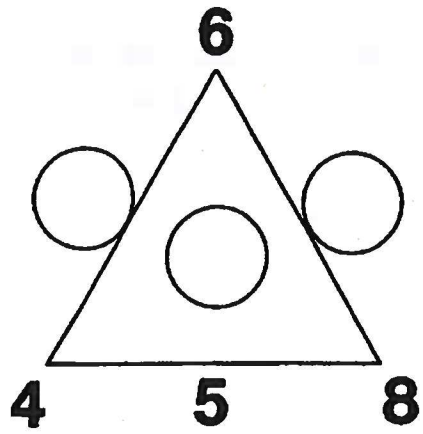
Make the sum of the numbers on each side equal the number in the center of the triangle.

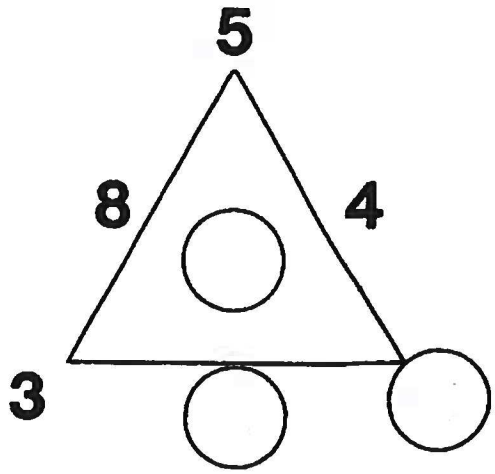








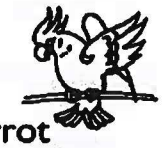




1. After using 2 dozen eggs to make omelettes, Ms. Warrington had 15 eggs left. How many eggs did she have at first?

2. Ms. Hall read 24 pages of her new book on Friday afternoon. On Saturday, she read 18 pages and by Sunday evening, she had completed 100 pages of the book. How many pages did she read on Sunday?

3. Ms. Welday bought groceries for $87 and gas for $23. She has $20 left over. How much money did she have before she bought groceries and gas?

My Stickers of Birds	
Owl	○ ○ ○ ○ ○ ○
Peacock	○ ○ ○
 Parrot	○ ○ ○ ○
Swan	○ ○ ○ ○ ○
Eagle	○ ○
Each ○ stands for 2 stickers.	

There are _____ stickers altogether.

There are _____ stickers of swans.

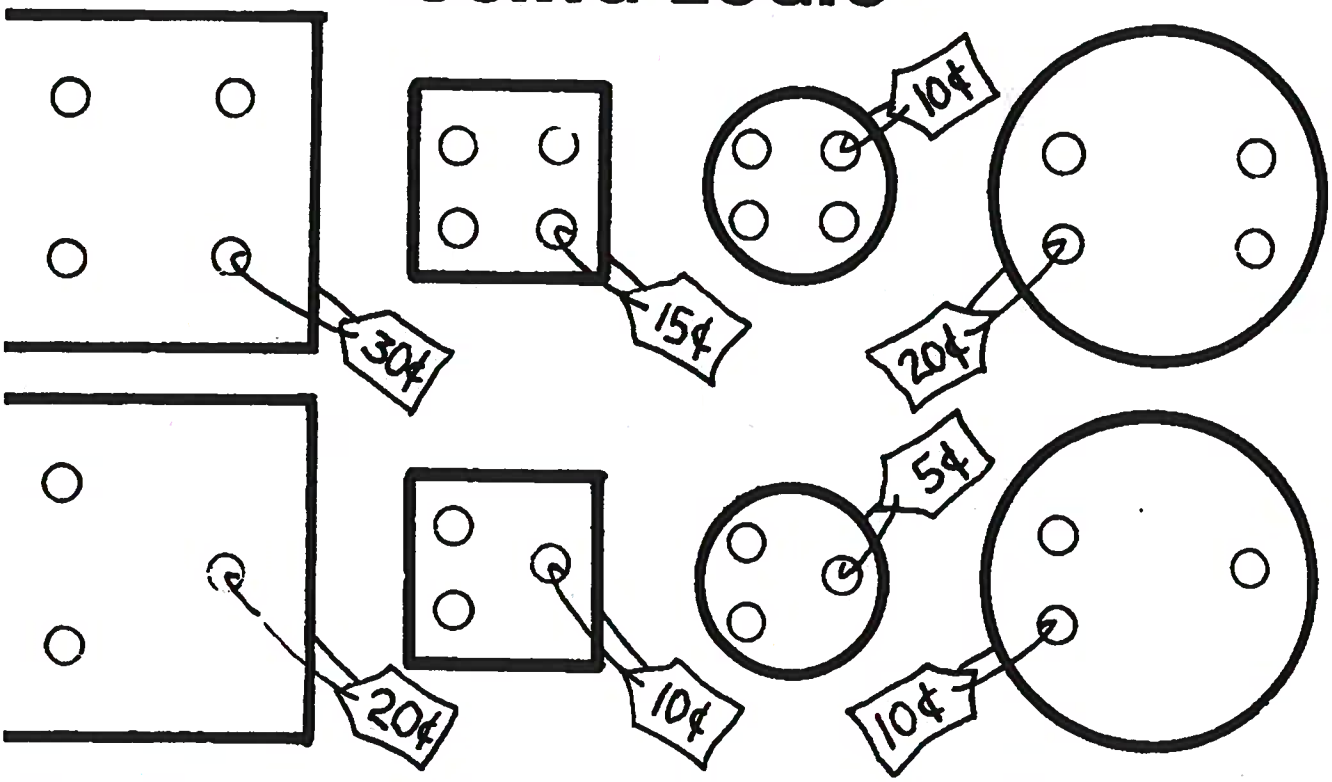
There are _____ more stickers of owls than of parrots.

There are _____ fewer stickers of eagles than of swans.

The number of stickers of _____ is the greatest.

The number of stickers of _____ is the smallest.

USING LOGIC



FACTS

- Alex bought a square button.
- It has 4 holes.
- It is *not* small.

How much did Alex pay for the button? _____

2. **FACTS**

- Megan bought a small button.
- It cost 10¢.
- It has 3 holes.

What shape is the button?

_____

FACTS

- Steven bought 2 different buttons.
- They are both the same size.
- Both buttons have the same number of holes.
- One of the buttons cost 30¢.

How much did the other button cost? _____

4. **FACTS**

- Lucy bought 2 buttons.
- They are *not* the same shape.
- They are *not* the same size.
- They do *not* have 4 holes.
- One of the buttons cost 20¢.

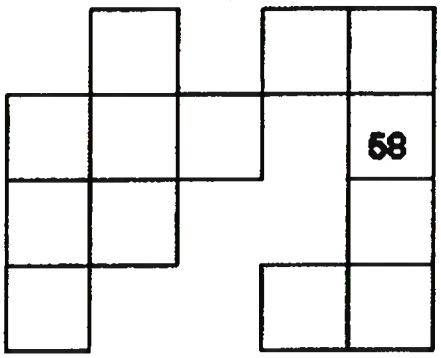
How much did the other button cost? _____

6 + 5 = 11 6 − 5 = 1 □ = 6 △ = 5	□ + △ = 12 □ − △ = 4 □ = ____ △ = ____
□ + △ = 12 □ − △ = 2 □ = ____ △ = ____	□ + △ = 10 □ − △ = 2 □ = ____ △ = ____
□ + △ = 10 □ − △ = 6 □ = ____ △ = ____	□ + △ = 11 □ − △ = 3 □ = ____ △ = ____

Fill in the missing numbers below:

Hundreds Chart Puzzles (1 - 100)

1)



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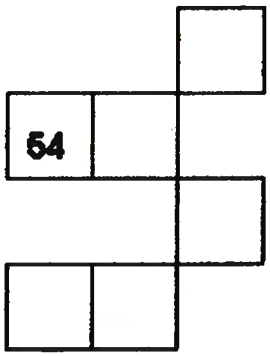
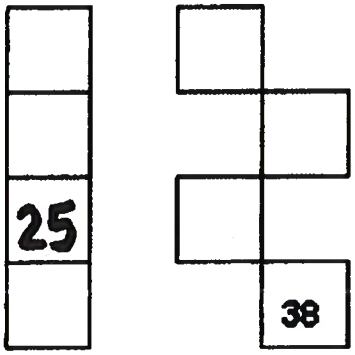
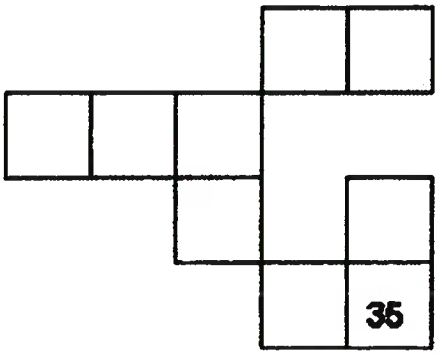


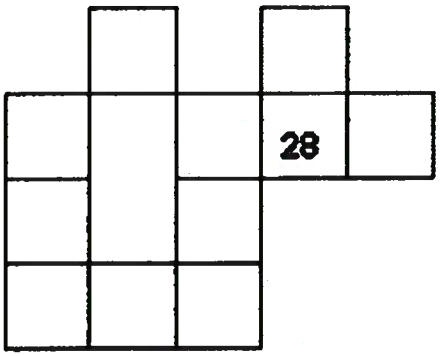
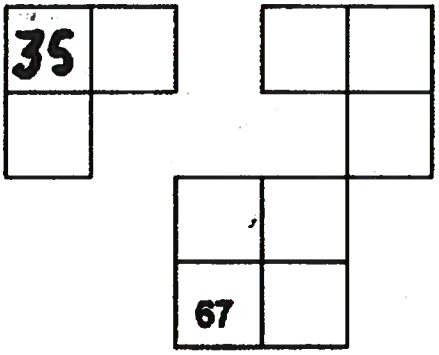
3)



4)



5)



6)