# Balanced Assessment *in* Mathematics

# 3

These tasks give you a chance to show how you reason and solve mathematical problems.

Please show your work and reasoning in the spaces provided.

Name: _____     Male  Female

School: _____ City:    _____

Teacher: _____ Grade: _____

Date: _____

Do not write in the box below:

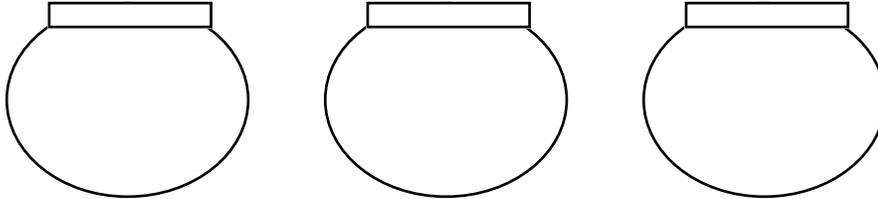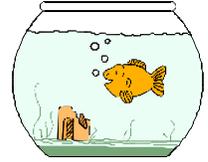| 3 | Goldfish Bowls 7 | Birthday Decoration 8 | Making a Doll House 8 | The Math Test 8 | Valerie's Puzzles 9 | Total 40 |
|---|---|---|---|---|---|---|
| 09 | | | | | | |

# Goldfish Bowls

This problem gives you the chance to:
• use numbers in a real situation

1. Dan has 3 goldfish bowls.
   He keeps 12 goldfish in each bowl.

   How many goldfish does Dan have?  _____
   Show how you figured it out.


Dan always has the same number of fish in each of his goldfish bowls.

2. He breaks one bowl, so now he has just 2 bowls.
   How many fish will he need to put in each bowl?  _____


3. He buys two more bowls, so now he has 4 bowls.
   How many fish will he put in each bowl?          _____


4. If he has 6 bowls how many fish will he put in each bowl?     _____
   Show how you figured it out.



5. Dan discovers that if he has 5 fish bowls he can't have the same number of fish in
   each bowl. Explain how you know he is correct.
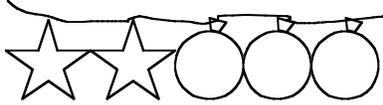
_____

_____

7

Goldfish Bowls

## Birthday Decoration

This problem gives you the chance to:
• find and extend a pattern

Cameron is decorating the house to celebrate his mom's birthday.
He makes a pattern with silver stars and red balloons.

The first piece looks like this.



When he adds piece #2 it looks like this.



1. Draw piece #3 onto the pattern above.

   Cameron needs to know how many stars and balloons he will be using.
   He makes this table to help.

| number of pieces | 1 | 2 | 3 | 4 | 5 |
|---|---|---|---|---|---|
| number of stars | 2 | 4 | | | |
| number of balloons | 3 | 6 | | | |

2. Fill in the numbers in the table for three pieces.

3. How many stars and balloons will he need to make five pieces?
   Write your answer in the table above.

4. When he started decorating, Cameron had 26 balloons and 19 stars. He said that he
   would be able to make nine pieces. Is he correct? _____
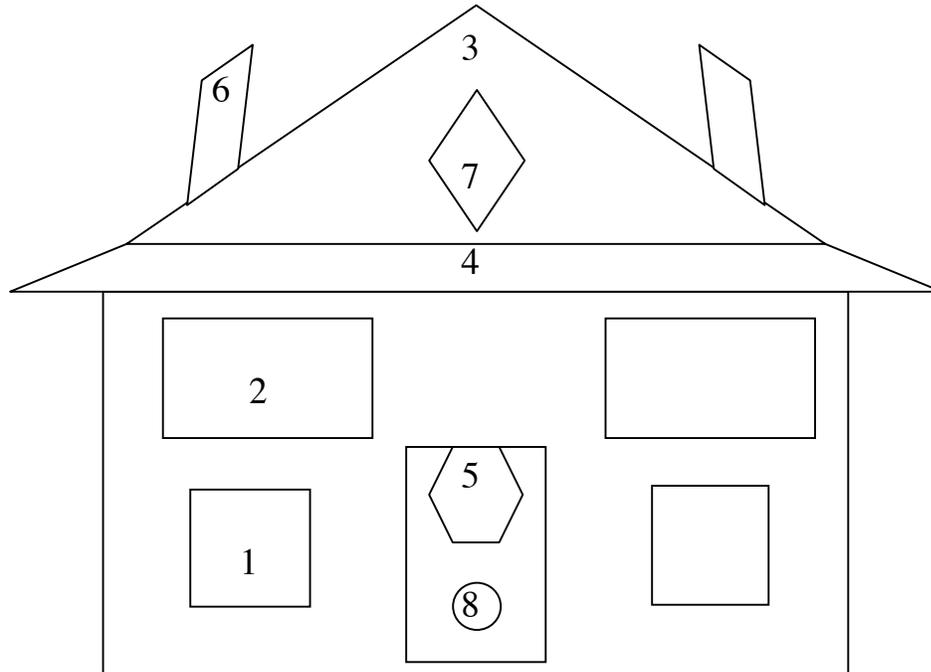   Explain your work.

_____

_____

8

Birthday Decoration

# Making a Doll House

This problem gives you the chance to:
• recognize, name and describe shapes

Jack's dad makes doll houses. This is one of his designs.
He numbers the shapes he uses.



1. Name the shapes he has used.

   1_____    2 _____    3 _____    4 _____

   5_____    6 _____    7 _____    8 _____

2. Which one of these shapes does not have a line of symmetry?   _____

3. Look at the shapes numbered 2 and 4.
   Write one thing that is the same about these shapes.

_____

   Write one thing that is different about them.

_____

4. Jack's dad likes his doll house designs to have at least one line of symmetry.
   Draw the line of symmetry on this house.

8

Making a Doll House

# The Math Test

This problem gives you the chance to:
• use a bar chart

This morning the Grade 3 students took a math test.
The test was scored out of 40 points.
The students did well and they all scored more than 30 points.
Here is a graph of their results.
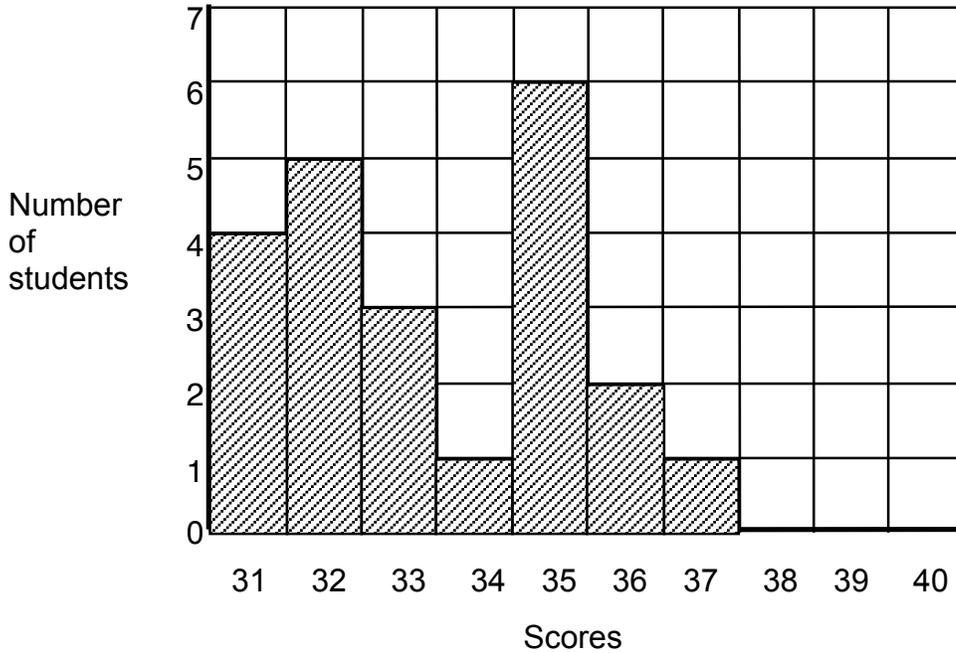


1. How many students scored 33 points? _____

2. Which score was earned by the largest number of students? _____

3. How many students earned **more** than 34 points? _____
   Show how you figured this out.

4. How many students took this test? _____
   Show how you figured this out.

5. Two children were absent this morning so they had to take the test this afternoon.
   They also did very well. They scored 31 and 34. Put these scores onto the graph.

8

# Valerie's Puzzles

This problem gives you the chance to:
• solve whole number problems

Valerie likes to do number puzzles. Here is one of her puzzles.

Each square of nine numbers must contain **all** the numbers 1, 2, 3, 4, 5, 6, 7, 8 and 9.

Each number should be used only **once** in each square of nine numbers.

Each row must add up to the number at the end.

Three numbers are always filled in at the start of each puzzle.

Complete these puzzles for Valerie.

| 1 |   |   | = | 12 |
|---|---|---|---|----|
|   | 2 |   | = | 15 |
|   |   | 3 | = | 18 |

| | | 3 | = | 12 |
|---|---|---|---|----|
| | 6 | | = | 15 |
| 9 | | | = | 18 |

| | | 1 | = | 12 |
|---|---|---|---|----|
| | | 4 | = | 15 |
| | | 7 | = | 18 |

**9**

Valerie"s Puzzles