

# 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:

<b>3</b>	Square Patterns	Parking Cars	Adding Numbers	Which Shape?	A Question of Numbers	Total
	7	7	9	9	8	40
<b>07</b>						



PLEASE TURN TO NEXT PAGE



Figure 1  
1 face  
4 sides

Figure 2  
1 face  
4 sides

Figure 3  
1 face  
4 sides

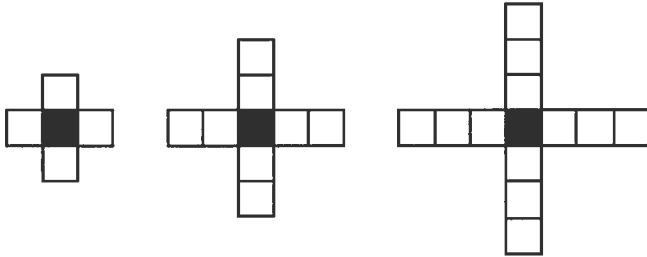
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## Square Patterns

This problem gives you the chance to:

- find and use a pattern
- 

Tom makes patterns using black squares and white squares.



**Shape #1**

1 black  
4 white

**Shape #2**

1 black  
8 white

**Shape #3**

1 black  
12 white

1. Describe Shape #4.

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Tom makes a table to show the number of black squares and white squares he needs to make different shapes.

Shape #	1	2	3	4	5
Number of black squares	1	1	1		
Number of white squares	4	8	12		

2. How many black squares and white squares does Tom need to make Shape #4?  
Write your answers in the table above.

3. How many black squares and white squares does Tom need to make Shape #5? Write your answers in the table.

Explain how you figured it out.

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4. Tom makes a pattern using 33 black squares and white squares in all. Which Shape # does he make? \_\_\_\_\_

Show how you figured it out.

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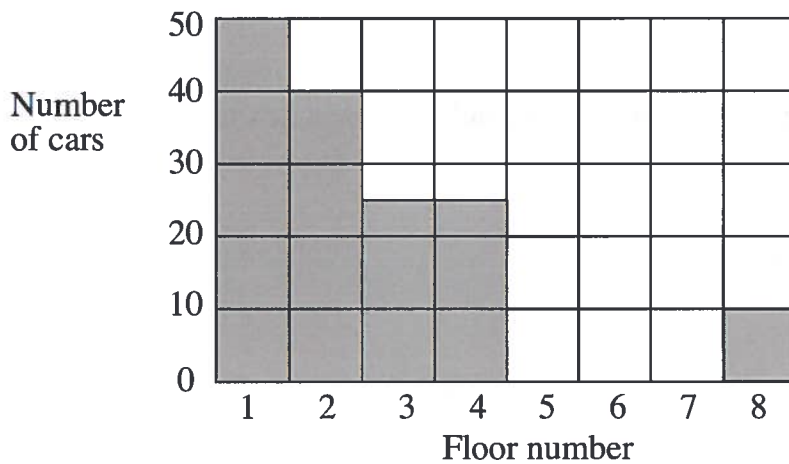
## Parking Cars

This problem gives you the chance to:

- interpret a bar graph
- 



This bar chart shows the number of cars parked in the multi-level parking garage at a shopping center today. Each floor holds up to 50 cars.



1. On which floor are the most cars parked? \_\_\_\_\_

How many cars are there on this floor? \_\_\_\_\_

2. On which two floors are the same number of cars parked?

Floors \_\_\_\_\_ and \_\_\_\_\_

3. How many more cars are parked on Floor 1 than on Floor 8? \_\_\_\_\_

4. How many cars, in all, are parked on the parking garage?  
Show how you figured this out.

\_\_\_\_\_

5. Fifteen more cars come into the parking garage.  
Show these cars on the graph, parking them in the lowest floors.

Explain why you parked these cars in this way.

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## Adding Numbers

This problem gives you the chance to:

- work with different methods of adding
- 

There are many different ways to add numbers.

Here is one way to add the numbers 55 and 58.

$$\begin{array}{r} 55 \\ + 58 \\ \hline 113 \end{array}$$

1. Below are some different ways of adding 55 and 58.

Most are correct but some are wrong!

If you think that a statement is correct, draw a ring around the word **Correct**.

If you think that a statement is wrong draw a ring around the word **Wrong**.

**Under each statement show why you think that it is correct or wrong.**

- a. Double 50 then add 8 then add 5.

Correct

Wrong

- b. Start with 58 then add 50 then add 5.

Correct

Wrong



c. Double 55 then add 8.

Correct

Wrong

d. Double 58 then subtract 3.

Correct

Wrong

e. Start with 55 then add 60 then subtract 2.

Correct

Wrong

f. Add 5 and 8 then add 100.

Correct

Wrong

g. Add 50 and 60 then subtract 5 and subtract 2.

Correct

Wrong

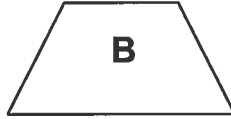
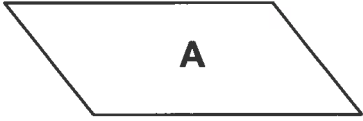
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## Which Shape?

This problem gives you the chance to:

- identify and describe shapes
  - use clues to solve riddles
- 

Use shapes A, B, or C to solve the riddles.



1. I have 4 sides.

My opposite sides are equal.

I have 4 right angles.

Which shape am I?

\_\_\_\_\_

2. I have 4 sides.

I have only 1 pair of parallel sides.

Which shape am I?

\_\_\_\_\_

3. I have 4 sides.

My opposite sides are parallel.

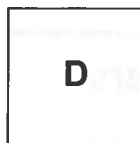
I do not have any right angles.

- a. Which shape am I?

\_\_\_\_\_

- b. Draw lines that divide my shape into a rectangle and two right triangles.

4. Write three different clues for shape D.



Clue 1:

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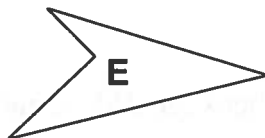
Clue 2:

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Clue 3:

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5. Look closely at shapes E and F.



Write a statement that tells how they are alike.

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Write a statement that tells how they are different.

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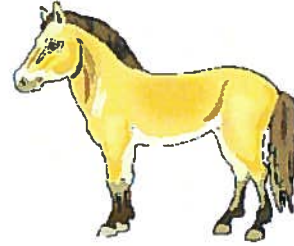
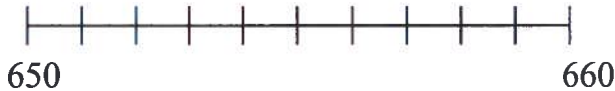
## A Question of Numbers

This problem gives you the chance to:

- show you can compare and order numbers
- 

Holly's class is learning about big numbers.

1. Here is part of the class number line.



Put an **X** on the number line, on the place that is halfway between 650 and 660.

What is the number that should be there? \_\_\_\_\_

2. Holly knows a pony weighs between 365 pounds and 425 pounds.

Write a possible number for the weight of a pony. \_\_\_\_\_ pounds

3. The activity center swimming pool holds between 1,875 gallons and 1,940 gallons of water.

Write a possible number for the amount of water the swimming pool holds. \_\_\_\_\_ gallons

4. A school computer could cost between \$2,950 and \$3,055.

Give three possible prices for the computer.

\$ \_\_\_\_\_

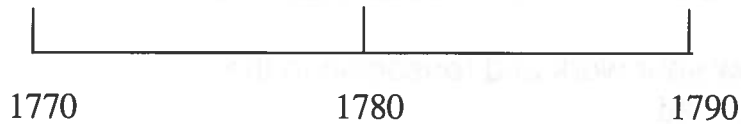
\$ \_\_\_\_\_

\$ \_\_\_\_\_

5. The American Revolution started in 1775 and finished in 1783.

In which year was it halfway through? \_\_\_\_\_

Show how you know using this number line.



6. Holly's teacher says the school library has 1000 books.

Holly thinks that the library may have 40 more books.

What is the greatest number of books that the library could have? \_\_\_\_\_

Show how you figured this out.

Tom thinks that the library may have 40 fewer books than 1000.

What is the smallest number of books that the library could have? \_\_\_\_\_

Show how you figured this out.

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Do not write in the box below:

<b>3</b>	The Pet Shop 10	House Numbers 8	Blob Bugs 8	Looking Glass Land 6	Time to Get Clean 8	Total 40
<b>08</b>						