

Name \_\_\_\_\_ Date \_\_\_\_\_ (10A)

1. There are 28 girls and 23 boys on the bus. Which of the following would be **best** to use to **estimate** the total number of children on the bus?

- 20 + 20
- 20 + 30
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2. Samantha's mom bought her a two-wheel bike for \$58. She also bought a helmet for \$17 for Samantha. Which of the following would be **best** for Samantha's mom to use to **estimate** the difference between the two prices?

- 50 - 10
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3. Ramon practiced on his drums for 32 minutes on Saturday. He also practiced on 41 minutes on Sunday. Which of the following would be **best** for Ramon to use to estimate the total number of minutes he practiced?

- 30 + 40
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4. E.J. put 12 ounces of bird seed in his bird feeder on Saturday. He put 17 ounces in the bird feeder on Tuesday. Which of the following would be **best** for E.J. to use to **estimate** the number of ounces of bird seed in put in the bird feeder altogether?

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5. Jim's puppy weighs 38 pounds. His pet pony weights 92 pounds. Which would be **best** for Jim to use to **estimate** how many more pounds his pony weighs than his dog?

- 90 - 30
- 90 - 40
- 100 - 30
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6. Jim played with his dog 22 minutes. He rode his pony for 49 minutes. Which would be **best** for Jim to use to **estimate** how many minutes he played with both animals?

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(10A)

7. Mrs. Gallant needs to add 529 and 897. Which of the following would be **best** for Mrs. Gallant to use to **estimate** the sum?

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8. Mrs. Strelau (stray low) had 826 marbles. She lost 432 of her marbles. Which of the following would be **best** for her to use to **estimate** how many marbles she has left?

- 800 – 400
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9. Mrs. Block bought a new book for \$22.98. She gave the clerk \$50. Which of the following would be **best** for Mrs. Block to use to estimate her change?

- \$20 - \$50
- \$30 - \$50
- \$50 - \$20
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(10A)

10. Mr. Hanrahan bought a CD for \$29.85. He also spent \$48.25 on a new set of tools. Which of the following would be **best** for Mr. Hanrahan to use to **estimate** the total amount of money he spent?

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- \$20 + \$40
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11. There are 286 girls and 419 boys in Greene-Hills School. Which of the following would be **best** to use to estimate the total number of children?

- 200 + 400
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12. Last year, Angela's hens laid 523 eggs. This year the hens laid 789 eggs. Which of the following would be **best** for Angela to use to **estimate** how many more eggs were laid this year than last year?

- 700 – 500
- 700 - 600
- 800 – 500
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Name \_\_\_\_\_

Date \_\_\_\_\_

Part 2

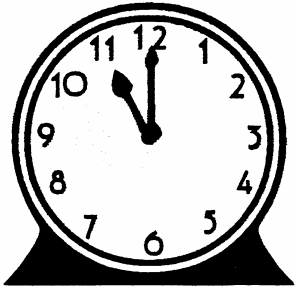
(14A)

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- 4:30  
 5:30  
 6:00  
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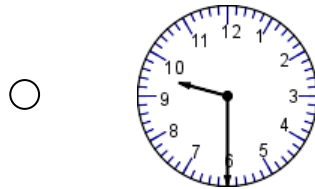
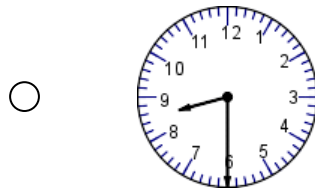
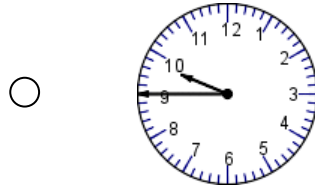
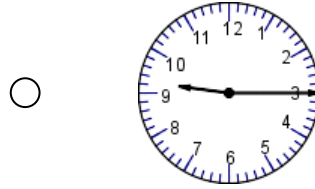
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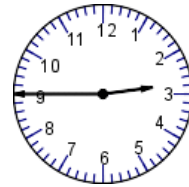
- 9:30  
 10:00  
 10:30  
 11:00

(14A)

3. Math class begins at half-past nine. Which clock shows that time?



4. Jonathan's grandfather took a nap at the time shown below. What time does the clock show?



- 2:15  
 2:45  
 3:15  
 3:45

(14A)

5. Kris went shopping at the time shown on the clock below. What time is that?



- Quarter to 5
- Quarter after 5
- Half-past 5
- Quarter to 6

(14A)

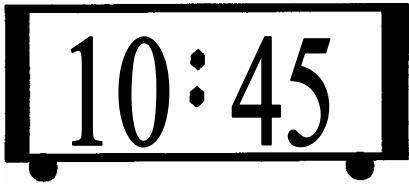
7. Basketball practice began at the time on the clock.



What time did basketball practice begin?

- Quarter past 3
- Half-past 3
- 3 o'clock
- Quarter of 3

6. Jabari needs to be at the dentist's office at the time shown on the clock.



What time is it on the clock above?

- Quarter of 10
- Quarter after 10
- Quarter of 11
- Quarter after 11

8. Javier looked at his watch. What time did his watch show?



- half-past seven
- quarter past seven
- quarter of seven
- seven o'clock

Name \_\_\_\_\_ Date \_\_\_\_\_ (Part 3)

(14B)

(14B)

1. Mr. Johnson left for work at 7:30 A.M. It took him one hour to drive to work. At what time did he arrive at work?

- 7:00
- 7:45
- 8:00
- 8:30

2. The third graders left school at 8:00 on a field trip. They drove 1 hour and 30 minutes to Sturbridge Village. At what time did they arrive?

- 9:00
- 8:45
- 8:30
- 9:30

3. Mrs. Lopez drove one half-hour to get to the mall. She left at 10:00. At what time did she arrive at the mall?

- 10:30
- 10:45
- 11:00
- 11:15

4. Greg finished playing golf at 4:30 P.M. He played for 2 hours. At what time had he started?

- 6:30
- 5:30
- 3:30
- 2:30

5. The toy store closes at 9:00 P.M. It is open for 12 hours. At what time does it open?

- 8:00 AM
- 9:00 AM
- 10:00 AM
- 11:00 AM

6. Connor shut off the TV at 5:30 P.M. He had been watching a show for  $1\frac{1}{2}$  hours. When did he begin watching TV?

- 3:00
- 3:30
- 4:00
- 4:30

(14B)

7. Jana had a piano lesson from 6:30 to 7:00 PM. How long was her lesson?

- $\frac{1}{2}$  hour
- 1 hour
- $1\frac{1}{2}$  hours
- 2 hours

8. Michael works at the grocery store from 4:15 until 6:15 each day. How long does Michael work each day?

- $1\frac{1}{2}$  hours
- 2 hours
- $2\frac{1}{2}$  hours
- 3 hours

9. Dominique started eating lunch at 12:15. She finished at 1:00. How long did she spend eating lunch?

- $\frac{1}{4}$  of an hour
- $\frac{1}{2}$  an hour
- $\frac{3}{4}$  of an hour
- 1 hour

(14B)

10. Bill began cutting the grass at 4:00 PM. He finished at 5:00 PM. How many minutes did it take Bill to cut the grass?

- 30
- 45
- 60
- 75

11. The Littles walked into the Peabody Museum at 10:30 in the morning. They walked out at 12:00 PM. How long did they stay inside the museum?

- 75 minutes
- 90 minutes
- 105 minutes
- 120 minutes

12. Ethan answered his cell phone at 4:30 PM. He finished speaking at 5:00 PM. How many minutes did he speak?

- 30
- 40
- 50
- 60

13. Science class began at 1:30. It ended at 3:00. How long did the class last?

- 1 hour
- 1 hour 15 minutes
- 1 hour 30 minutes
- 1 hour 45 minutes

(14B)

Use the calendar to answer questions 14 and 15.

MAY						
Sun.	Mon.	Tues.	Wed.	Thurs	Fri.	Sat.
			1	2	3	4
5	6	7	8	9	10	11
12	13	14	15	16	17	18
19	20	21	22	23	24	25
26	27	28	29	30	31	

14. Maggie's birthday is the fourth Tuesday in May. What is the date of her birthday?

- May 16
- May 19
- May 28
- May 30

15. Tina's father was born on May 11. What date is that on the calendar?

- first Wednesday
- second Saturday
- third Wednesday
- second Thursday

(14B)

Use the calendar to answer questions 16 and 17.

April						
SUN	MON	TUES	WED	THURS	FRI	SAT
	1	2	3	4	5	6
7	8	9	10	11	12	13
14	15	16	17	18	19	20
21	22	23	24	25	26	27
28	29	30				

16. Peter's birthday is the 5<sup>th</sup> Tuesday in April. What is the date of Peter's birthday?

- April 5
- April 16
- April 23
- April 30

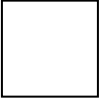

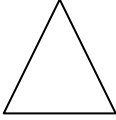


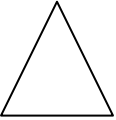


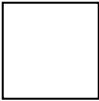







17. Tom is getting his new car on April 22. What date is that on the calendar?

- third Sunday
- second Saturday
- first Monday
- fourth Monday

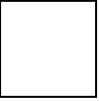
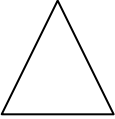
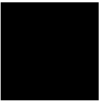

Name \_\_\_\_\_ Date \_\_\_\_\_

(22A)

The figures in the chart follow a pattern.

















			
			
			
			





1. Which figure belongs in the chart?

- 
- 
- 
- 

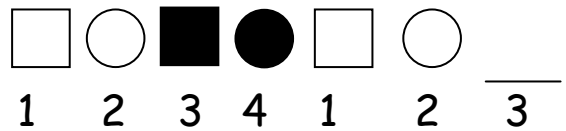
(22A)





2. What shape is missing in the chart?

- 
- 
- 
- 

3. What is the next shape in the pattern?



- 
- 
- 
- 

(22A)

The numbers in the chart follow a pattern.

2	5	8	11
6	9	12	15
10	13	16	19
14	17	20	

4. Which number is missing in the chart?

- 21  
 22  
 23  
 24

5. What number is missing in the following pattern?

4 8 12 \_\_\_\_ 20 24

- 14  
 16  
 18  
 20

(22A)

6. What number is missing in the pattern?

45, 40, 35, 30, 25, 20, \_\_\_\_

- 14  
 15  
 16  
 17

7. Which number belongs in the blank space?

Start	End
5	9
10	14
15	19
20	

- 40  
 28  
 24  
 51

8. Which rule was used to fill in each number in the "Out" boxes?

In	Out
8	3
9	4
12	7
15	10

- Add 4                       Add 5  
 Subtract 5                   Subtract 4

(22B)



(22B)

10. What is the next number in this pattern? **Write** the number. Then explain why you chose that number.

26, 22, 18, 14, ____
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Answer: \_\_\_\_\_

Explanation:

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(25A)

11. Tom's class is having a contest to see who can find the most objects outside the school. Any class that finds enough objects to earn exactly 80 points will have a pizza party. These are the objects to be found and the points each object is worth:

OBJECT	POINTS
Toy Cars	5
Umbrellas	5
Tennis Balls	10
Baseball Caps	10

- ◆ No one is allowed to earn more than 30 points for any one object.
- ◆ At least one of each object must be found.
- ◆ Fill in the chart to show one way to earn **exactly** 80 points.
- ◆ Show your work.
- ◆ Use more paper if you need more room.

OBJECT	NUMBER FOUND	POINTS EARNED
TOTALS		

Revised: Nov. 27, 2005 and July 2007

The following items are intended for practice only of the 4<sup>th</sup> Generation CMT content and format, not for instruction of concepts. Much teaching must precede the use of these items to ensure children's success both in mathematics and on the CMT.

### **TOPIC 5: ADDING 2- AND 3-DIGIT NUMBERS**

#### **PACKET 1 – July 8, 2007**

- ◆ 1C. Identify alternative forms of expressing 2-digit whole numbers using regrouping.
- ◆ 5B. Identify the appropriate operation or number sentence to solve a story problem.
- ◆ 5C. Write story problems from addition or subtraction number sentences.
- ◆ 7A. Add and subtract 1- and 2-digit whole numbers without regrouping.
- ◆ 7B. Add 1- and 2-digit whole numbers with regrouping.
- ◆ 11A. Identify a reasonable estimate to a problem. [2 Strategies: Rounding and "Change only one number" for problems of "little less/little more"]

#### **TOPIC 5 – Extra Practice – Not related to Topic 5 in GWM**

**PACKET 2 – July 30, 2007** Most of this packet was the original packet for Grade 3 Topic 5. Examples for Objectives 5C, 7A, 7B, and 11A were removed and will be used in a later packet.

- ◆ 2A. Relate whole numbers to pictorial representations of base ten blocks and vice versa.
- ◆ 4B. Describe magnitude of 2- and 3-digit whole numbers.
- ◆ 4C. Round 2-digit whole numbers in context.
- ◆ 4D. Identify points representing 2- and 3-digit whole numbers on a number line and vice versa.
- ◆ 6A. Addition and Subtraction Facts to 18
- ◆ 9A/B. Solve word problems with and without extraneous information.

#### **PACKET 3 – August 29, 2007**

- ◆ 10A. Identify the best expression to find an estimate.
- ◆ 14A. Tell time to the nearest hour, half-hour and quarter hour using analog and digital clocks.
- ◆ 14B. Solve problems involving time, elapsed time (15 minute increments) and calendars.
- ◆ 22A. Extend or complete patterns, or identify rules using numbers and attributes.
- ◆ 22B. Extend or complete patterns and state rules using numbers and attributes.
- ◆ 25A. Solve extended numerical and statistical problems.

Name \_\_\_\_\_ Date \_\_\_\_\_ (10A)

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$20 + 20$

$20 + 30$

$30 + 20$  \*\*\*

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2. Samantha's mom bought her a two-wheel bike for \$58. She also bought a helmet for \$17 for Samantha. Which of the following would be **best** for Samantha's mom to use to **estimate** the difference between the two prices?

$50 - 10$

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3. Ramon practiced on his drums for 32 minutes on Saturday. He also practiced on 41 minutes on Sunday. Which of the following would be **best** for Ramon to use to estimate the total number of minutes he practiced?

$30 + 40$  \*\*\*

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4. E.J. put 12 ounces of bird seed in his bird feeder on Saturday. He put 17 ounces in the bird feeder on Tuesday. Which of the following would be **best** for E.J. to use to **estimate** the number of ounces of bird seed in put in the bird feeder altogether?

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5. Jim's puppy weighs 38 pounds. His pet pony weights 92 pounds. Which would be **best** for Jim to use to **estimate** how many more pounds his pony weighs than his dog?

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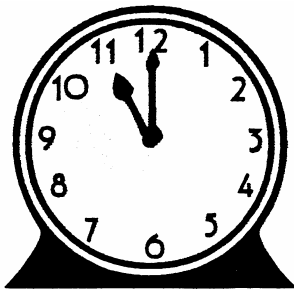
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- 4:30
- 5:30 \*\*\*
- 6:00
- 6:30

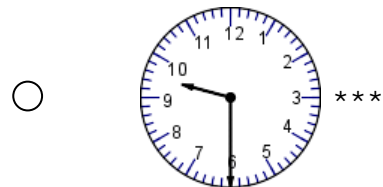
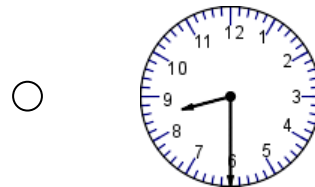
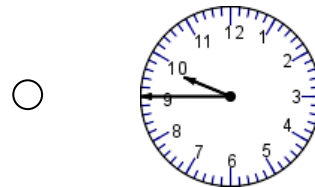
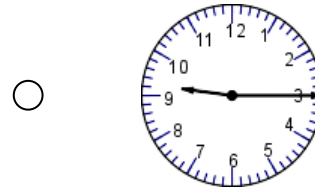
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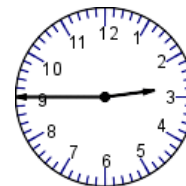
- 9:30
- 10:00
- 10:30
- 11:00 \*\*\*

(14A)

3. Math class begins at half-past nine. Which clock shows that time?



4. Jonathan's grandfather took a nap at the time shown below. What time does the clock show?



- 2:15
- 2:45 \*\*\*
- 3:15
- 3:45

(14A)

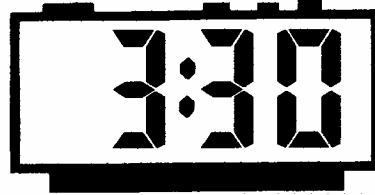
5. Kris went shopping at the time shown on the clock below. What time is that?



- Quarter to 5
- Quarter after 5 \*\*\*
- Half-past 5
- Quarter to 6

(14A)

7. Basketball practice began at the time on the clock.



What time did basketball practice begin?

- Quarter past 3
- Half-past 3 \*\*\*
- 3 o'clock
- Quarter of 3

6. Jabari needs to be at the dentist's office at the time shown on the clock.



What time is it on the clock above?

- Quarter of 10
- Quarter after 10
- Quarter of 11 \*\*\*
- Quarter after 11

8. Javier looked at his watch. What time did his watch show?



- half-past seven
- quarter past seven
- quarter of seven
- seven o'clock \*\*\*

Name \_\_\_\_\_ Date \_\_\_\_\_ (Part 3)

**GO FORWARD IN TIME** (14B)

1. Mr. Johnson left for work at 7:30 A.M. It took him one hour to drive to work. At what time did he arrive at work?

- 7:00
- 7:45
- 8:00
- 8:30 \*\*\*

2. The third graders left school at 8:00 on a field trip. They drove 1 hour and 30 minutes to Sturbridge Village. At what time did they arrive?

- 9:00
- 8:45
- 8:30
- 9:30 \*\*\*

3. Mrs. Lopez drove one half-hour to get to the mall. She left at 10:00. At what time did she arrive at the mall?

- 10:30 \*\*\*
- 10:45
- 11:00
- 11:15

**GO BACKWARDS IN TIME** (14B)

4. Greg finished playing golf at 4:30 P.M. He played for 2 hours. At what time had he started?

- 6:30
- 5:30
- 3:30
- 2:30 \*\*\*

5. The toy store closes at 9:00 P.M. It is open for 12 hours. At what time does it open?

- 8:00 AM
- 9:00 AM \*\*\*
- 10:00 AM
- 11:00 AM

6. Connor shut off the TV at 5:30 PM. He had been watching a show for  $1\frac{1}{2}$  hours. When did he begin watching TV?

- 3:00
- 3:30
- 4:00 \*\*\*
- 4:30

**ELAPSED TIME:** <http://www.shodor.org/interactivate>

(14B)

7. Jana had a piano lesson from 6:30 to 7:00 PM. How long was her lesson?

- $\frac{1}{2}$  hour \*\*\*
- 1 hour
- $1\frac{1}{2}$  hours
- 2 hours

8. Michael works at the grocery store from 4:15 until 6:15 each day. How long does Michael work each day?

- $1\frac{1}{2}$  hours
- 2 hours \*\*\*
- $2\frac{1}{2}$  hours
- 3 hours

9. Dominique started eating lunch at 12:15. She finished at 1:00. How long did she spend eating lunch?

- $\frac{1}{4}$  of an hour
- $\frac{1}{2}$  an hour
- $\frac{3}{4}$  of an hour \*\*\*
- 1 hour

(14B)

10. Bill began cutting the grass at 4:00 PM. He finished at 5:00 PM. How many minutes did it take Bill to cut the grass?

- 30
- 45
- 60 \*\*\*
- 75

11. The Littles walked into the Peabody Museum at 10:30 in the morning. They walked out at 12:00 PM. How long did they stay inside the museum?

- 75 minutes
- 90 minutes \*\*\*
- 105 minutes
- 120 minutes

12. Ethan answered his cell phone at 4:30 PM. He finished speaking at 5:00 PM. How many minutes did he speak?

- 30 \*\*\*
- 40
- 50
- 60

13. Science class began at 1:30. It ended at 3:00. How long did the class last?

- 1 hour
- 1 hour 15 minutes
- 1 hour 30 minutes \*\*\*
- 1 hour 45 minutes

(14B)

Use the calendar to answer questions 14 and 15.

MAY						
Sun.	Mon.	Tues.	Wed.	Thurs	Fri.	Sat.
			1	2	3	4
5	6	7	8	9	10	11
12	13	14	15	16	17	18
19	20	21	22	23	24	25
26	27	28	29	30	31	

14. Maggie's birthday is the fourth Tuesday in May. What is the date of her birthday?

- May 16 [3<sup>rd</sup> Thurs]
- May 19 [3<sup>rd</sup> Sun]
- May 28 \*\*\*
- May 30 [5<sup>th</sup> Thurs]

15. Tina's father was born on May 11. What date is that on the calendar?

- first Wednesday
- second Saturday \*\*\*
- third Wednesday
- second Thursday

(14B)

Use the calendar to answer questions 16 and 17.

April						
SUN	MON	TUES	WED	THURS	FRI	SAT
	1	2	3	4	5	6
7	8	9	10	11	12	13
14	15	16	17	18	19	20
21	22	23	24	25	26	27
28	29	30				

16. Peter's birthday is the 5<sup>th</sup> Tuesday in April. What is the date of Peter's birthday?

- April 5
- April 16
- April 23
- April 30 \*\*\*

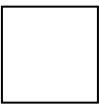

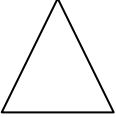





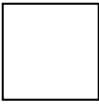

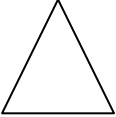




17. Tom is getting his new car on April 22. What date is that on the calendar?

- third Sunday
- second Saturday
- first Monday
- fourth Monday \*\*\*


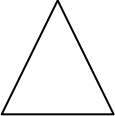


Name \_\_\_\_\_ Date \_\_\_\_\_

(22A)

The figures in the chart follow a pattern.
















			
			
			
			





1. Which figure belongs in the chart?

-  \*\*\*
- 
- 
- 

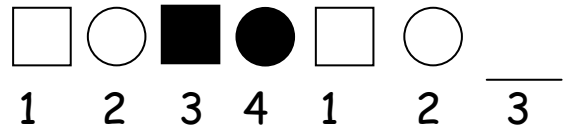
(22A)





2. What shape is missing in the chart?

-  
-  \*\*\* 

3. What is the next shape in the pattern?



- 
-  \*\*\* (3<sup>rd</sup> Shape)
- 
- 

(22A)

The numbers in the chart follow a pattern.

2	5	8	11
6	9	12	15
10	13	16	19
14	17	20	

4. Which number is missing in the chart?

- 21
- 22
- 23\*\*\*
- 24

5. What number is missing in the following pattern?

4 8 12 \_\_\_\_ 20 24

- 14
- 16\*\*\*
- 18
- 20

(22A)

6. What number is missing in the

45, 40, 35, 30, 25, 20, ____
------------------------------

pattern?

- 14
- 15\*\*\*
- 16
- 17

7. Which number belongs in the blank space?

Start	End
5	9
10	14
15	19
20	

- 40
- 28
- 24\*\*\*
- 51

Rule of this Function Box: ADD 4
--

8. Which rule was used to fill in each number in the "Out" boxes?

In	Out
8	3
9	4
12	7
15	10

- Add 4
- Add 5
- Subtract 5\*\*\*
- Subtract 4

(22B)


9. Look at the pattern below.



What shape should come next in the pattern? Answer: \_\_\_\_\_(circle – Student may write word or draw shape)

Explain why you think that shape should come next in the pattern.

Student must include a description of the pattern. The names of the shapes may be written as words or drawn. Examples:

- ◆ The pattern goes hexagon, triangle, circle, and parallelogram.
- ◆ The pattern is 6-sided shape, triangle, circle and 4 sided-shape.
- ◆ This pattern has 

Student must also explain why circle is the correct shape.

Example: In this pattern, circle always follows triangle, and triangle was the last shape drawn.

**Scoring Rubric: Patterns - Grade 4 (Third Generation)**

2 Points: The student extends or completes the pattern.

- Correct figure drawn/Correct number written
- Adequate explanation given

1 Point: The student demonstrates some confusion about the pattern.

- Fails to draw the correct figure/Fails to write correct number, or
- Fails to give an appropriate explanation

0 Points: The student does not indicate any recognition of a pattern in the response.

- Incorrect figure drawn/ Incorrect number written, AND
- Incorrect or no explanation given

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(22B)

10. What is the next number in this pattern? **Write** the number. Then explain why you chose that number.

26, 22, 18, 14, \_\_\_\_

Answer: \_\_\_\_\_ Missing number is 10

Possible explanations:

- ◆ Each number takes away 4.
- ◆ The difference between 26 and 22 is 4. The difference between 22 and 18 is 4. The difference between 18 and 14 is 4. So I took 4 away from 14 and got 10.
- ◆ The pattern counts by 4's.

Explanations that are not acceptable:

- ◆ It is a pattern of 10. (The missing number is 10. That's not the pattern.)
- ◆ I wrote NINE because it is counting by fours. (The missing number is 10, not 9.)
- ◆ I wrote 10 because this pattern is counting by THREES. (The pattern counts by fours, not threes.)

(25A)

11. Tom's class is having a contest to see who can find the most objects outside the school. Any class that finds enough objects to earn exactly 80 points will have a pizza party. These are the objects to be found and the points each object is worth:

OBJECT	POINTS
Toy Cars	5
Umbrellas	5
Tennis Balls	10
Baseball Caps	10

- ◆ No one is allowed to earn more than 30 points for any one object.
- ◆ At least one of each object must be found.
- ◆ Fill in the chart to show one way to earn **exactly** 80 points.
- ◆ Show your work.

◆ Use more paper if you need more room.

OBJECT	NUMBER FOUND	POINTS EARNED
Toy Cars (5)	2	$5 + 5 = 10$
Umbrellas (5)	2	$5 + 5 = 10$
Tennis Balls (10)	3	$10 + 10 + 10 = 30$
Baseball Caps (10)	3	$10 + 10 + 10 = 30$
TOTALS		80

2 cars =	10
4 umbrellas =	20
3 tennis balls =	30
2 caps =	20
TOTAL =	80

OBJECT	NUMBER FOUND	POINTS EARNED
Toy Cars (5)	6	$5 \times 6 = 30$
Umbrellas (5)	6	$5 \times 6 = 30$
Tennis Balls (10)	1	$10 \times 1 = 10$
Baseball Caps (10)	1	$10 \times 1 = 10$
TOTALS		80

If the work is shown totally in the chart, another explanation is not needed.

OBJECT	NUMBER FOUND	POINTS EARNED
Toy Cars (5)	4	20
Umbrellas (5)	6	30
Tennis Balls (10)	2	20
Baseball Caps (10)	1	10
TOTALS		80

POSSIBLE Explanation:

- ◆ For the cars I added  $5 + 5 + 5 + 5$
- ◆ For the umbrellas I added 5 two more times than the cars ( $20 + 10$ )
- ◆ For the tennis balls, I added  $10 + 10$
- ◆ For the baseball cap, I added one more 10.
- ◆ That made a total of 80 in all.