

Total:	/91
_____ %	

**Ratio and Percent Unit Exam
Grade 6 – Math**

Name _____
Date _____
Goal _____ %

PART A - Written

1. Write the ratios given the following information:

/3

There are 12 apples, 33 oranges and 6 pears at the Taber Fruit Stand.

What is the ratio of: a) oranges to pears? _____

b) pears to apples? _____

c) oranges to fruit? _____

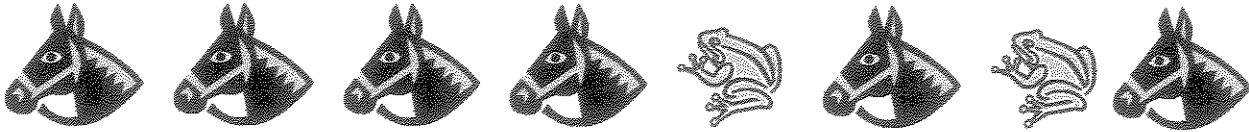
2. Write the ratio of the **number of games won** to the **number of games played** for each baseball team:

/4

Team	Wins	Ties	Losses	Ratio
Blue Jays	3	2	1	
Expos	0	3	5	
Trappers	4	1	0	
Dodgers	1	1	3	

/7

3. Look at the following:



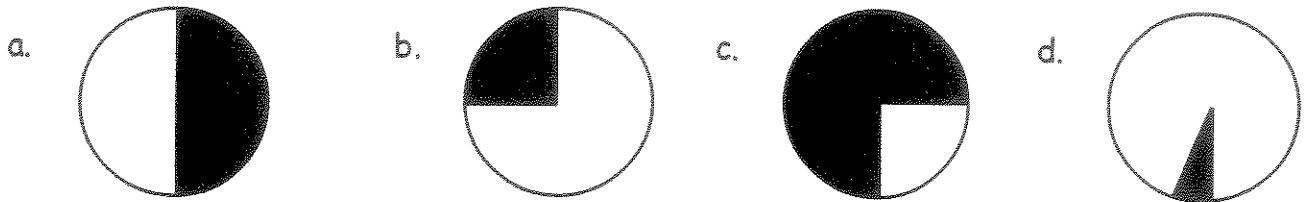
State what animals are being compared:

/4

- a) 2 to 6 _____
- b) 8 to 2 _____
- c) 3 to 1 _____
- d) 1 to 4 _____

4. Estimate the percent of the circle that is shaded:

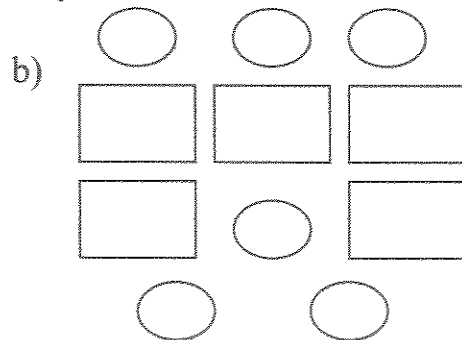
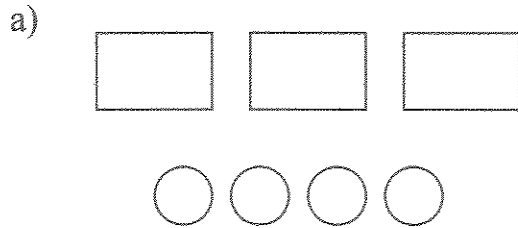
/4



5. Write each of the following ratios in three ways:

/6

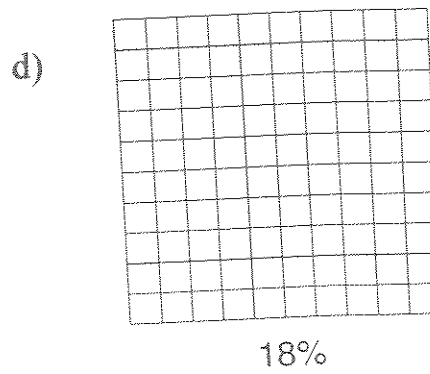
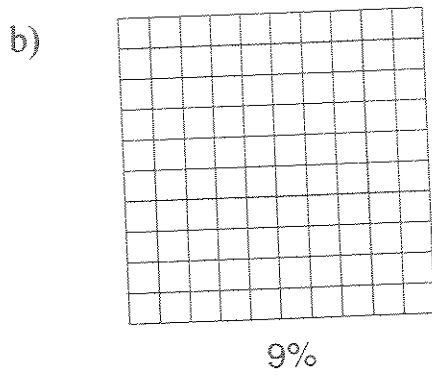
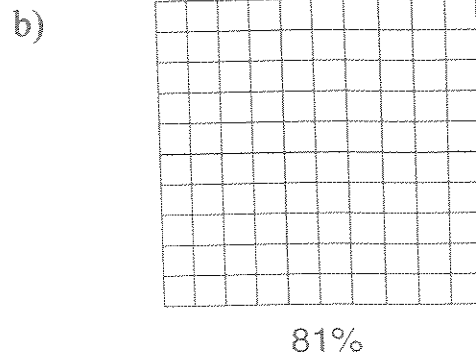
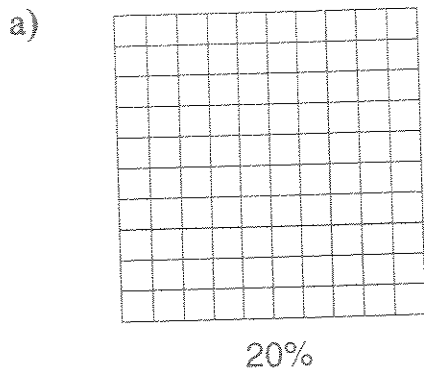
(squares to circles)



/14

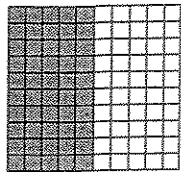
6. In each grid, shade the percent given.

/4



7. Write a fraction, a decimal, and a percent to describe the shaded part of the grid.

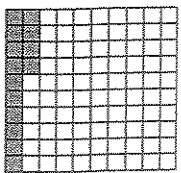
/9

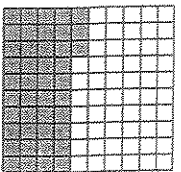


Fraction

Decimal

Percent





8. Match each percent to a fraction in the box.

/8

$\frac{1}{10}$	$\frac{1}{5}$	$\frac{1}{4}$	$\frac{1}{3}$	$\frac{1}{2}$	$\frac{2}{3}$	$\frac{3}{4}$	$\frac{9}{10}$
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a) 33% _____ b) 10% _____ c) 25% _____ d) 50% _____

e) 20% _____ f) 75% _____ g) 66% _____ h) 90% _____

9. The chart is incomplete. Fill in the fraction, the decimals, the percents, and the ratios that are missing. **THE FRACTION AND RATIO MUST BE IN LOWEST TERMS.**

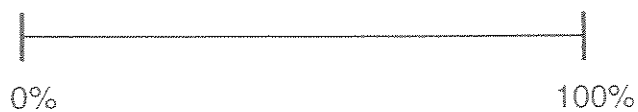
/12

Fraction	Decimal	Percent	Ratio
	0.42		
$\frac{13}{100}$			
		5%	
	0.08		

10. Label the points on each number line.

/4

a) 33% and 66%



b) 25% and 75%.

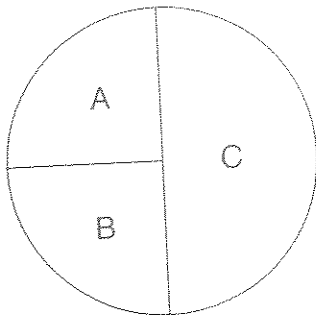


/24

11. Look at each circle. Estimate the percent of the area represented by each letter.

/8

a)

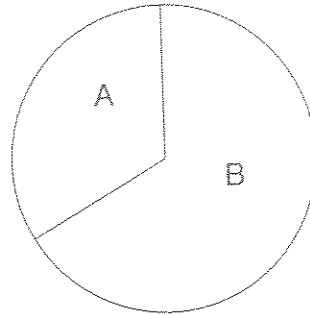


A _____

B _____

C _____

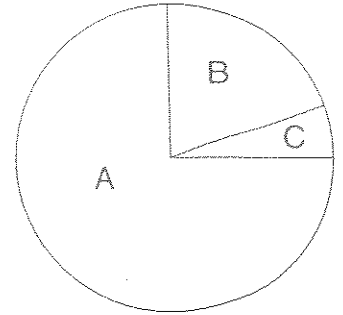
b)



A _____

B _____

c)



A _____

B _____

C _____

12. Write each of the following ratios in **lowest terms**. Show your work!

/8

a) 5 to 30 =

b) 8 : 4 =

c) $\frac{3}{12}$ =

d) 6 : 18 =

/16

13. Write one **equivalent ratio** for each of the following. Be sure to show your work!

/8

a) 5 to 7 =

b) 3 : 2 =

c) $\frac{4}{5}$ =

c) 6 : 7 =

14. Complete the chart. Show your work in the column provided.

/9

Price	Percent Off	Amount Off	Sale Price	Work
\$20.00	10%			
\$15.00	50%			
\$30.00	25%			

/17

Ratio and Percent – Unit Exam
Grade 6 – Math

Name _____
Date _____ Class _____
Goal _____% Total = 151

= _____%

Part B – You may use a calculator to answer each of the following questions. You may use scrap paper if needed.

Multiple Choice – Circle the BEST possible answer for each of the following questions.

15

Use the following information to answer question 1.

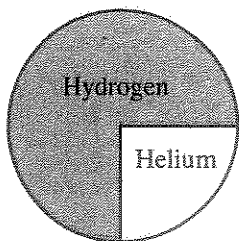
Science Topics and Number of Projects

Topic	Number of Projects
Air and Aerodynamics	9
Flight	7
Sky Science	8
Trees and Forests	6
Evidence and Investigations	5

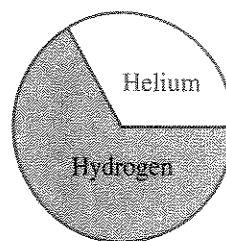
- What is the ratio of the number of “Evidence and Investigation” projects to the total number of projects?
 - 7:1
 - 6:1
 - 1:7
 - 1:6

- At another project display, Alex reads that the sun is made up of approximately 75% hydrogen and 25% helium. The pie chart that illustrates this information is

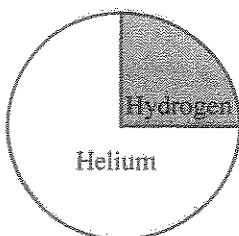
A.



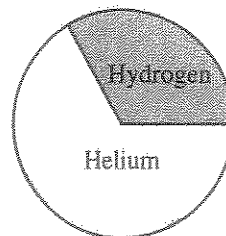
B.



C.



D.



12

Use the following chart to answer question 3.

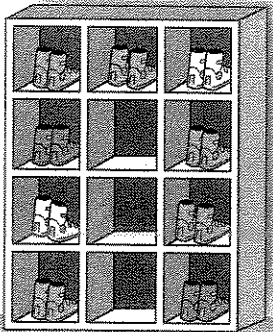
The following chart shows the mass of food scraps and how much water James and Sally give the pig each day.

Feeding Times Each Day	Food Scraps	Water
7 A.M.	1 kg	2 L
11 A.M.	0.5 kg	1 L
4 P.M.	0.5 kg	2 L

3. The ratio of total food scraps to total water each day is
- A. 2:5
 - B. 1:4
 - C. 5:2
 - D. 1:2

Use the following information to answer question 4.

After skiing, the students put their boots in a special boot cupboard.



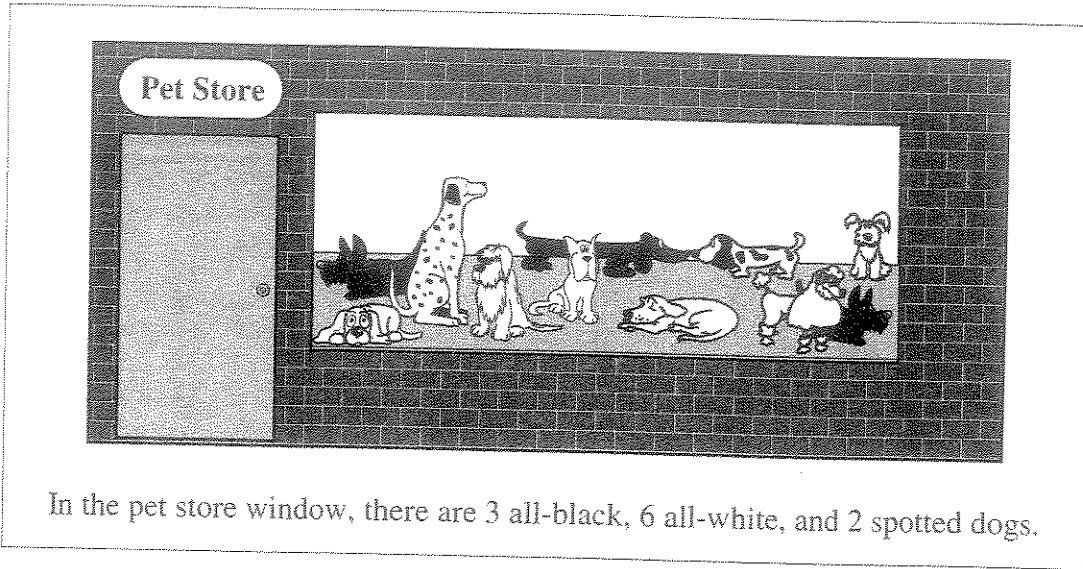
The image shows a boot cupboard with a 4x3 grid of compartments. There are 12 compartments in total. In each of the four rows, the first, second, and fourth compartments contain a pair of boots. The third compartment in each row is empty. Therefore, 8 out of 12 compartments are occupied by boots, and 4 out of 12 compartments are empty.

4. The percentage of spaces that are left empty in the boot cupboard is
- A. 25%
 - B. 30%
 - C. 70%
 - D. 25%

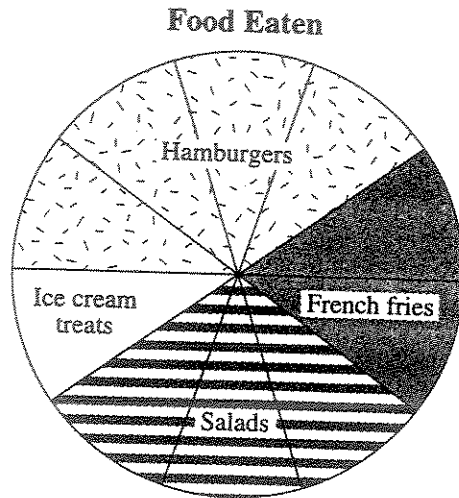
The twins are making juice for the party. It takes 1 can of concentrate and 3 cans of water to make 1 jug of juice.

Making Juice		
Cans of Concentrate	Cans of Water	Jugs of Juice
1	3	1
2	6	2
•	•	•
•	•	•
•	•	•
•	•	•

5. If the twins use 6 cans of concentrate, how many cans of water will they need and how many jugs of juice will they make?
- A. 6 cans of water and 18 jugs of juice
 - B. 7 can of water and 21 jugs of juice
 - C. 18 cans of water and 6 jugs of juice
 - D. 21 cans of water and 7 jugs of juice
6. Lisa eats $\frac{3}{5}$ of a pizza. This is equivalent to
- A. 3%
 - B. 6%
 - C. 30%
 - D. 60%
7. Some students had pizza for lunch. Michael ate $\frac{1}{2}$ of his pizza. Cliff ate $\frac{2}{5}$ of his pizza. David ate $\frac{3}{10}$ of his pizza and Patty ate $\frac{3}{5}$ of her pizza. Who ate the greatest portion of their pizza?
- A. Michael
 - B. Cliff
 - C. David
 - D. Patty



8. The ratio of all black dogs to all white dogs, in simplest form is
- A. 1:2
 - B. 1:3
 - C. 3:8
 - D. 3:11

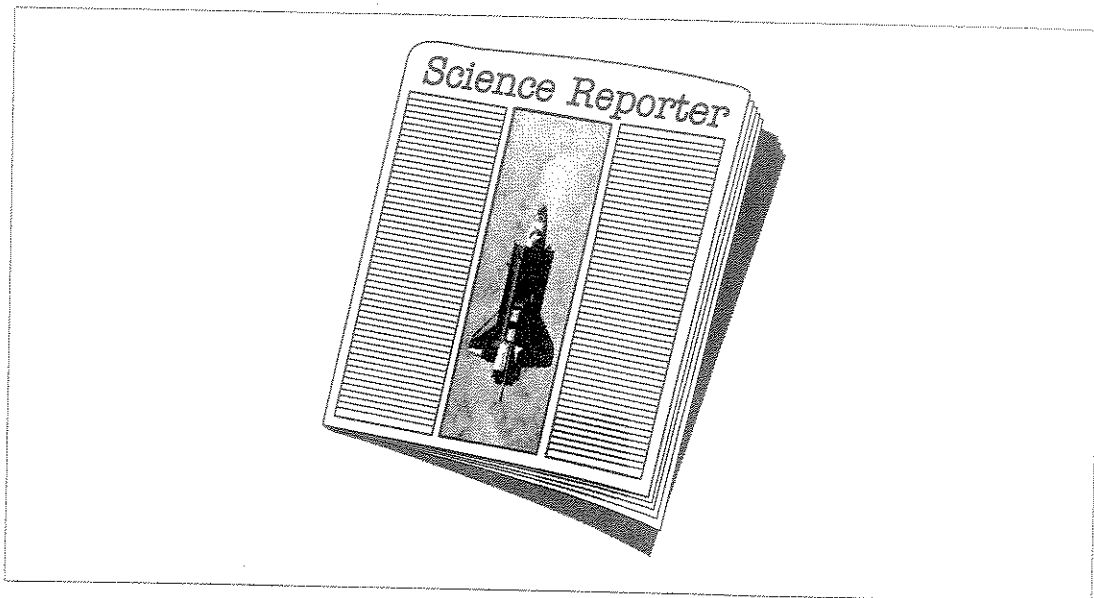


9. Hamburgers and french fries represents what percentage of the total food that the group ate?
- A. 20%
 - B. 40%
 - C. 50%
 - E. 60%

12

10. At a carnival, 25% of the people who attend, receive a free balloon. What fraction of people are given free balloons?
- A. $\frac{1}{25}$
 - B. $\frac{25}{10}$
 - C. 1:4
 - D. $\frac{25}{4}$

Use the following diagram to answer question 11.



11. About what percentage of the newspaper page above does the picture cover?
- A. 50%
 - B. 30%
 - C. 20%
 - D. 10%

12

Use the following information to answer questions 12 and 13.

The students in charge of writing the Sports section of the newspaper surveyed 30 students about their favourite sport. The following tally chart indicates the survey results.

Hockey	Swimming	Football

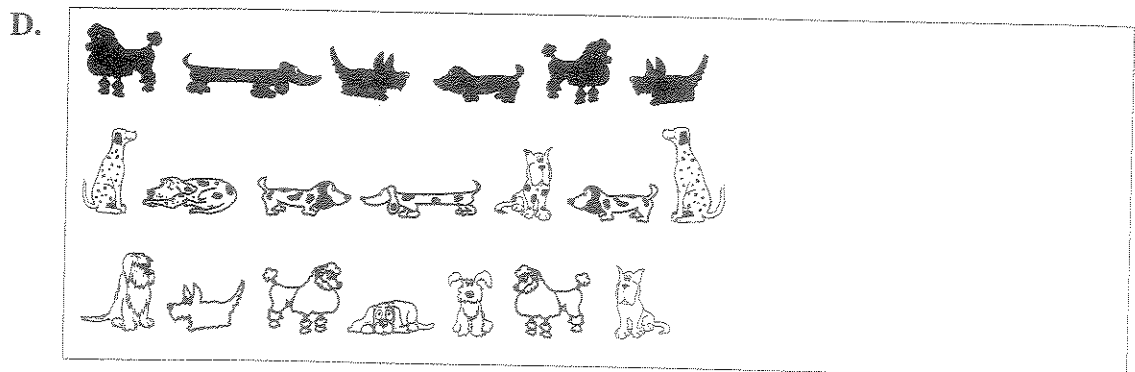
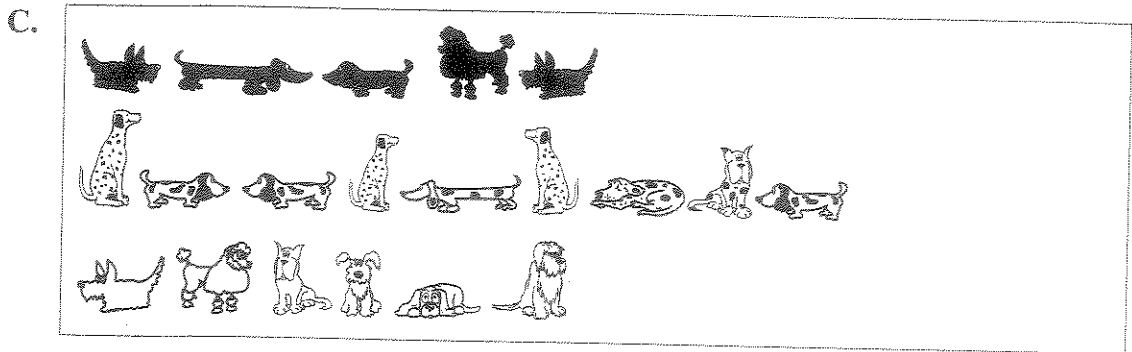
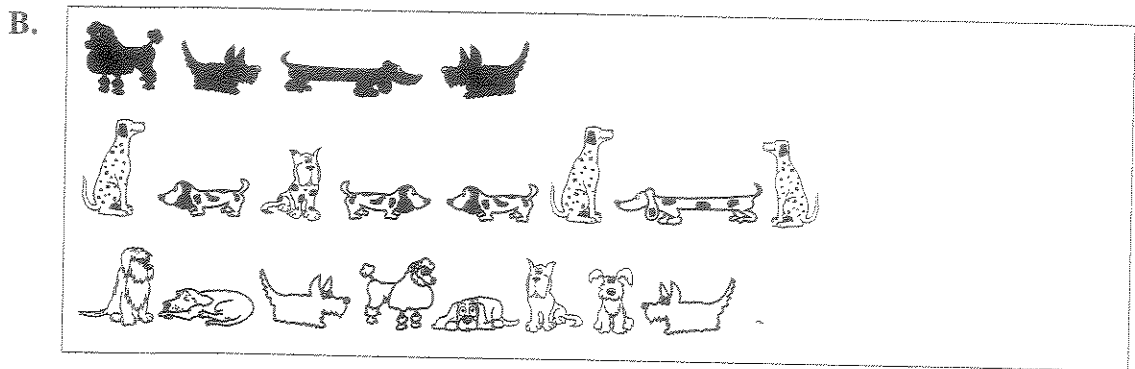
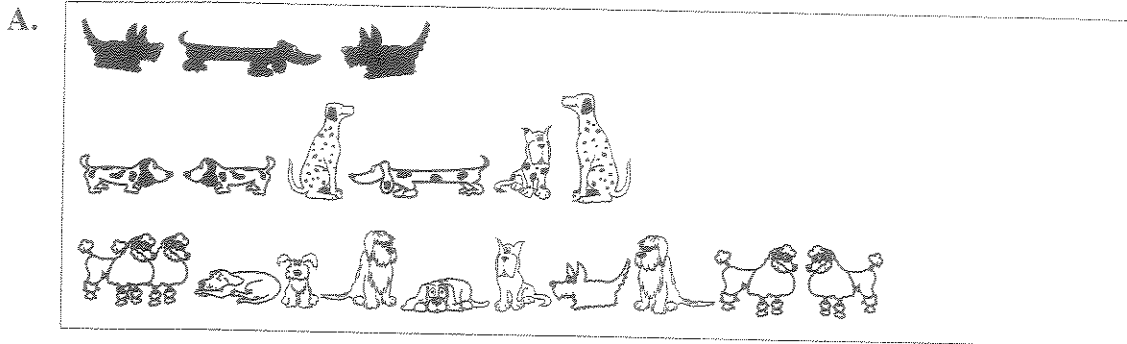
12. The percentage of students who chose hockey is
- A. 15%
 - B. 30%
 - C. 45%
 - D. 50%
13. The ratio of the number of students who chose swimming to the number of student who chose football is
- A. 1:5
 - B. 1:2
 - C. 3:5
 - D. 3:2

Use the following information to answer question 14.

A passenger jet travels at an average speed of 575 km/h from Edmonton to Toronto.

14. Given that the distance between to two cities is 2 375 km, approximately how long will the trip take?
- A. 120 min
 - B. 240 min
 - C. 575 min
 - D. 1 150 min

15. There are 20 dogs. Which of the following pictures shows that 30% of the dogs are all black?



1