Mathematics Grade 6 Unit 10: Probability 2012-2013

1 While at the mall, Taylor surveyed 100 people about their favorite ice cream flavors. The following table displays the results.
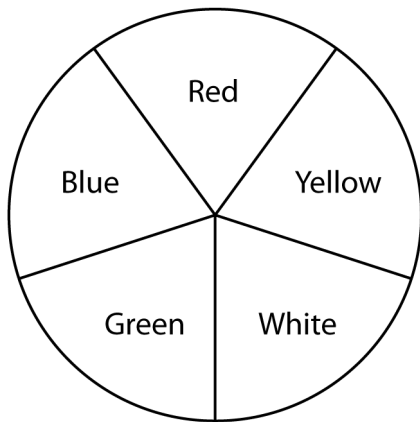
Ice Cream Flavor	Vanilla	Chocolate	Strawberry	Chocolate Chip
Number of People	●● ●●	●●●● ●●●	●● ●	●●● ●●●

● = 5 people

What is the equivalent decimal form that represents the fraction of people that choose strawberry?

GO ON

2 The spinner below is divided into equal-sized sections. If the spinner is spun 50 times, about how many times would you expect the spinner to land on blue?

F 10 times

G 25 times

H 5 times

J 12 times

3 The probability of an event is 0.352. What fraction represents an equivalent probability?

A $\frac{352}{100}$

B $\frac{44}{125}$

C $\frac{352}{10}$

D $\frac{100}{352}$

4 There are 15 girls and 10 boys in Mrs. Sweeny's sixth grade class, as shown in the model below.

G	G	G	B	B
G	B	G	G	G
G	G	B	G	B
B	G	B	B	G
G	B	G	B	G

Which of these shows the ratio of the students in the class that are boys?

F 15:25

G 10:15

H 10:25

J 25:10

5 A quilt pattern had four triangles for every 16 squares. Which ratio represents an equivalent ratio of triangles to squares for the quilt pattern?

A 2 triangles for every 8 squares

B 1 triangle for every 5 shapes

C 6 triangles for every 20 squares

D 12 squares for every 15 shapes

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GO ON

6 Brandi wants to participate in an after-school program. She has a choice of three dance classes, two gymnastics classes, or four sports classes. She cannot decide, so she puts all of the classes on slips of paper and draws one out of her hat. What is the probability that she draws a dance class?

F $\dfrac{2}{9}$

G $\dfrac{1}{3}$

H $\dfrac{4}{9}$

J $\dfrac{2}{3}$

7 The track team consists of four hurdlers, four high jumpers, and two sprinters. The track coach wants to randomly name a captain for the next track meet. What is the probability the person chosen will be a high jumper?

A 0.1

B 0.25

C 0.4

D 0.5

8 Bobby had a box of berry-flavored hard candies. Four were strawberry-flavored, three were blueberry-flavored, and one was raspberry-flavored. Bobby put his hand in the box and took one candy without looking. What is the probability that the candy he took was strawberry?

F 50%

G 4%

H 75%

J 10%

9 Monique has a silver dollar. If she flips her silver dollar 200 times, about how many times should she expect the coin to land on tails?
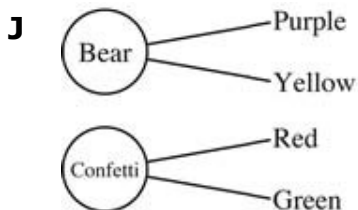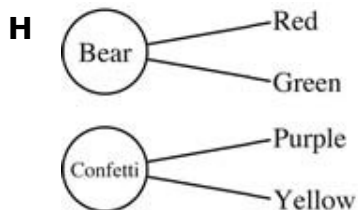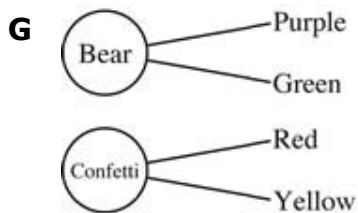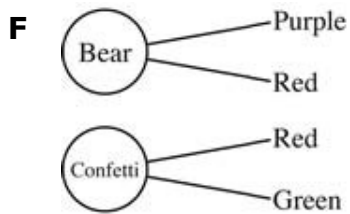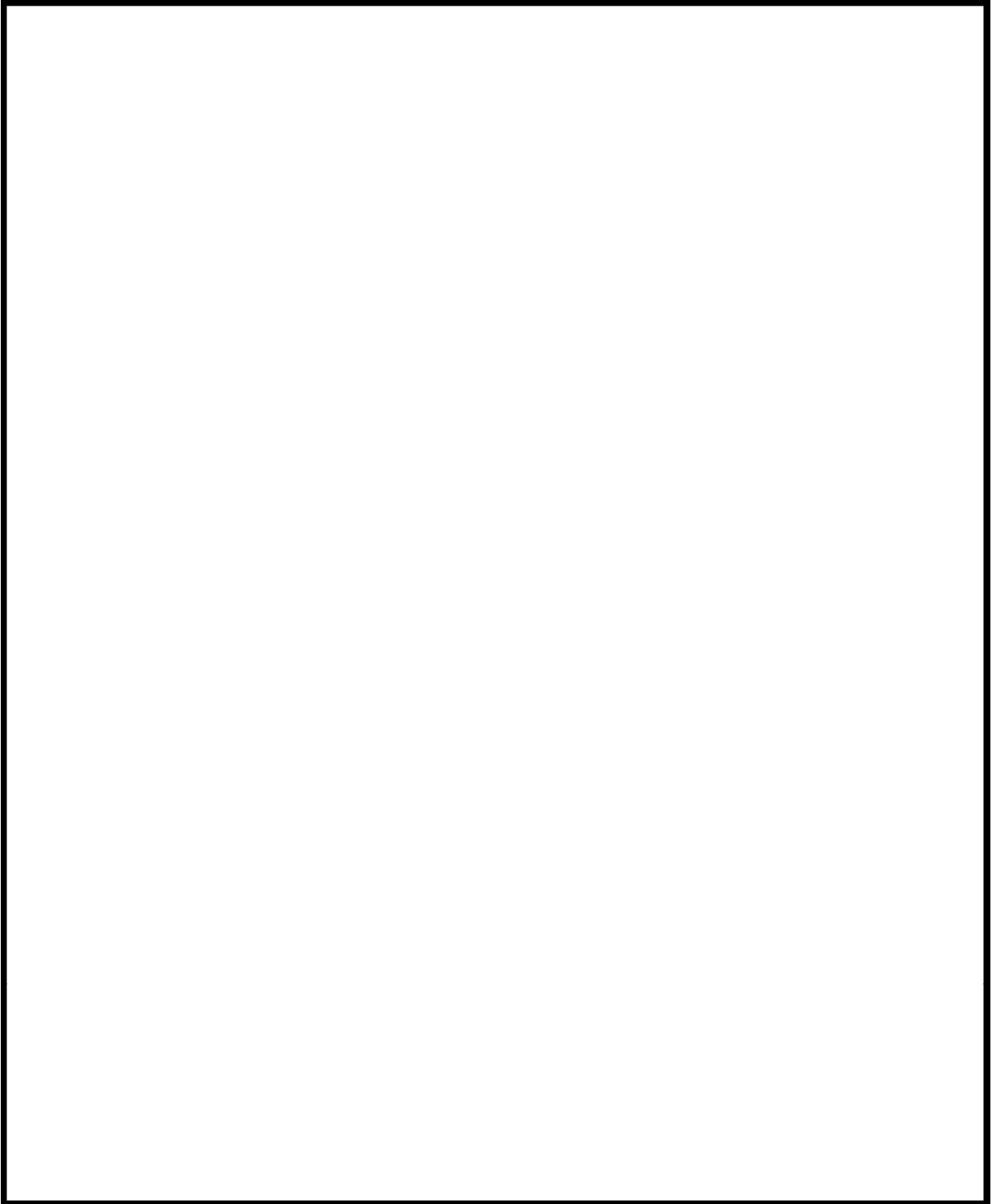
A 20 times

B 100 times

C 50 times

D 150 times

GO ON

10 At a party shop, Joyce has a choice of birthday balloons and colored ribbons. If she chooses the bear balloon, she will pick either a purple or yellow ribbon. If she chooses the confetti balloon, she will pick either a red or green ribbon. If each combination is shown only once, which diagram shows all the possible combinations of balloons and ribbons that Joyce can choose?

F

Bear — Purple
Bear — Red

Confetti — Red
Confetti — Green

G

Bear — Purple
Bear — Green

Confetti — Red
Confetti — Yellow

H

Bear — Red
Bear — Green

Confetti — Purple
Confetti — Yellow

J

Bear — Purple
Bear — Yellow

Confetti — Red
Confetti — Green

GO ON

11 Mr. Roberts wants to make an eye appointment. The doctor has time available on Tuesday, Wednesday, or Thursday at 9:00 a.m., 10:30 a.m., or 1:00 p.m. Make a tree diagram to show all possible choices Mr. Roberts has for his appointment.

12 Mr. Baca conducted a survey of the 40 students in his morning classes on the kinds of pets they owned. His results are shown in the table below.
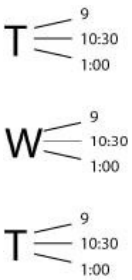
Pet	Number of Students
Cat	12
Dog	20
Fish	16
Gecko	8
Hamster	4

Create a bar graph from this data set.

STOP
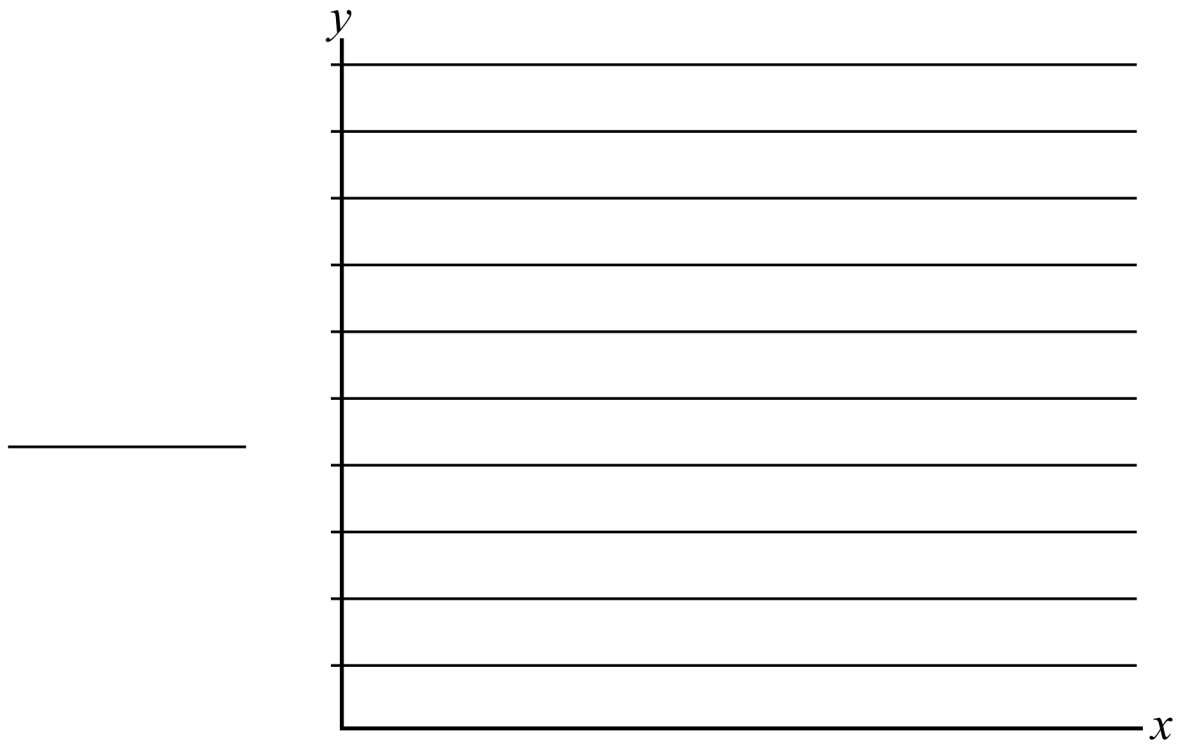
Test Key

Mathematics Grade 6 Unit 10: Probability 2012-2013

##	Item #	Correct Answer	Primary SE	Secondary SE	Obj/Cat
1	M06021933CS	0.15	6.1(B) [R]	6.13(B) [P]	STAAR: M1
2	M06025503CS	F	6.2(C) [R]	6.12(A) [P]	STAAR: M1
3	M06021914CS	B	6.1(B) [R]	None	STAAR: M1
4	M061150055D	H	6.3(B) [S]	None	STAAR: M2
5	M061096356D	A	6.3(B) [S]	None	STAAR: M2
6	M061090011D	G	6.9(B) [S]	6.11(C) [P]	STAAR: M5
7	M061087973D	C	6.9(B) [S]	6.11(C) [P]	STAAR: M5
8	M061087975D	F	6.9(B) [S]	6.11(A) [P]	STAAR: M5
9	M06025504CS	B	6.2(C) [R]	None	STAAR: M1
10	M063023160	J	6.9(A) [S]	6.11(A) [P]	STAAR: M5
11	M061087979D		6.9(A) [S]	6.11(D) [P]	STAAR: M5
12	M061096039D	0 to 3	6.10(D) [R]	6.12(A) [P]	STAAR: M5

Scoring Rubrics

12
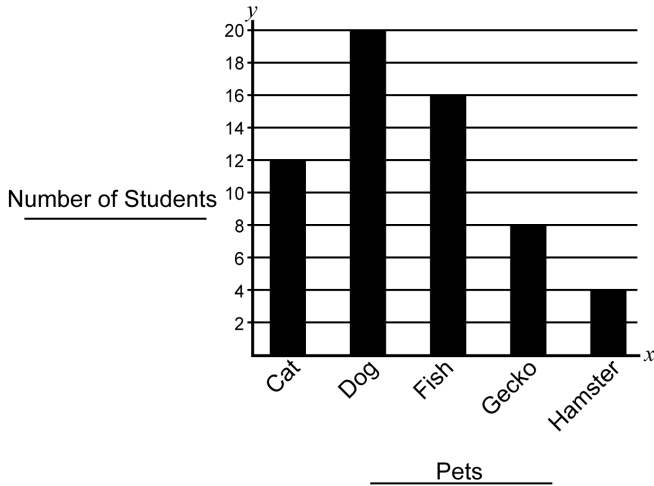
Check student's work for accuracy, consistent intervals, labels, etc.

3	The construction of the graph exhibits full understanding of labeling the x- and y- axis with titles and numbers. The bar graph clearly reflects correct representation of the relationship of the number of students to pets.
2	The construction of the graph exhibits some understanding of labeling the x- and y- axis with titles and numbers. The bar graph reflects some representation of the relationship of the number of students to pets.
1	The construction of the graph exhibits little understanding of labeling the x- and y- axis with titles and numbers. The bar graph does not clearly reflect correct respresentation of the relationship of the number of students to pets.
0	The student did not attempt to complete the task of labeling the x- and y- axis, nor did the student attempt to create the bar graph of the information.