End-of-the-Year Test Grade 5 Answer Key

Instructions to the teacher:
My suggestion for points per item is as follows. The total is 171 points. A score of 137 points is 80%.

Question #	Max. points	Student score
The Four Operations		
1	2 points	
2	6 points	
3	2 points	
4	2 points	
5	2 points	
6	2 points	
7	3 points	
subtotal		/ 19
Large Numbers		
8	2 points	
9	1 point	
10	1 point	
11	4 points	
subtotal		/ 8
Problem Solving		
12	3 points	
13	3 points	
14	3 points	
15	3 points	
16	3 points	
17	3 points	
subtotal		/ 18
Decimals		
18	4 points	
19	6 points	
20	3 points	
21	3 points	
22	3 points	
23	3 points	
24	9 points	
25	6 points	
26	9 points	
27	3 points	
28	3 points	
subtotal		/52

Question #	Max. points	Student score
Graphs		
29	3 points	
30	2 points	
31	4 points	
subtotal		/9
Fractions		
32	3 points	
33	4 points	
34	4 points	
35	2 points	
36	4 points	
37	2 points	
38	5 points	
39	3 points	
40	2 points	
41	4 points	
42	2 points	
43	2 points	
44	4 points	
subtotal		/41
Geometry		
45	4 points	
46	4 points	
47	2 points	
48	3 points	
49	3 points	
50	3 points	
51	1 point	
52	4 points	
subtotal		/24
TOTAL		/171

The Four Operations

1. a. 45
   b. 409,344

2. a. $x = 296,430$
   b. $Y = 80$
   c. $N = 3,304$

3. Any of these are correct:
   $4Y = 600$ or $4 \times Y = 600$ or $Y + Y + Y + Y = 600$ or $600 \div 4 = Y$ or $600 \div Y = 4$ or $600 - Y - Y - Y - Y = 0$.
   Solution: $Y = 150$.

4. a. $42 \times 10 = (10 - 4) \times 70$
   b. $143 = 13 \times (5 + 6)$

5. $(\$19.95 - \$5) \times 5$ or $5 \times (\$19.95 - \$5)$. The total cost was $74.75.

6. No, it is not. Explanations vary. For example: It is an odd number, and therefore cannot be divisible by an even number. $991 \div 4 = 247$ R3, leaving a remainder, so 991 is not divisible by 4.

7. a. $26 = 2 \times 13$
   b. $40 = 2 \times 2 \times 2 \times 5$
   c. 59 is prime

Large Numbers

8. a. 70,016,090
   b. 32,000,232,000

9. It is about $32,000 \times 300 = 9,600,000$. Other estimates are also possible.

10. 80 million or 80,000,000

11.

number	593,204	19,054,947
to the nearest 1,000	593,000	19,055,000
to the nearest 10,000	590,000	19,050,000
to the nearest 100,000	600,000	19,100,000
to the nearest million	1,000,000	19,000,000

Problem Solving

12. An 8-ft long board is 96 inches. One-sixth of that is 96 in. ÷ 6 = 16 in. The remaining piece is 80 inches, or 6 ft 8 in.

13. It would cost $7.80 to download ten songs. First, find the price of one song download: $4.68 ÷ 6 = $0.78. Then, multiply that by 10.

14. Lunch in the cafeteria costs 1/3 of $36, or $12. Mary spent $36 + 4 × $12 = $84 for lunch.

15.
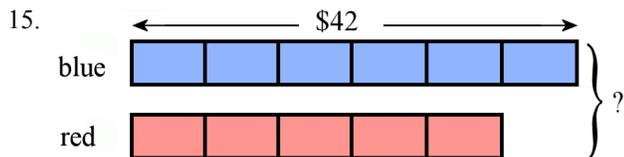
One block in the model is $42 ÷ 6 = $7. The red swimsuit costs 5 × $7 = $35. Together they cost $77.

16. a.
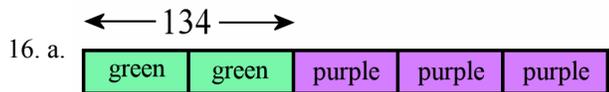
b. One block or part in the model is 134 ÷ 2 = 67 marbles. There are 3 × 67 = 201 purple marbles.

17. a. The DVD costs about $30. Karen pays 3/5 of it, which is about $30 ÷ 5 × 3 = $18. Ann pays about $12.

b. Karen pays $29.90 ÷ 5 × 3 = $17.94. Ann pays $11.96.

Decimals

18. a. 0.289 b. 0.30 c. 0.305 d. 0.313

19. a. 0.95 b. 0.72 c. 0.62 d. 1.26 e. 1.05 f. 0.37

20. a. 0.08 b. 0.081 c. 5.21

21. a. $\dfrac{48}{1000}$ b. $1\dfrac{4}{1000}$ c. $7\dfrac{22}{100}$

22. a. $0.31 > 0.031$ b. $0.43 > 0.093$ c. $1.6 > 1.29$

23.

rounded to...	nearest one	nearest tenth	nearest hundredth
5.098	5	5.1	5.10

rounded to...	nearest one	nearest tenth	nearest hundredth
0.306	0	0.3	0.31

24.

a. $0.4 × 7 = 2.8$	d. $10 × 0.05 = 0.5$	g. $1.1 × 0.3 = 0.33$
b. $0.4 × 0.7 = 0.28$	e. $100 × 0.05 = 5$	h. $70 × 0.9 = 63$
c. $0.4 × 700 = 280$	f. $1000 × 0.5 = 500$	i. $20 × 0.09 = 1.8$

25.

a. $0.36 ÷ 6 = 0.06$	c. $3 ÷ 100 = 0.03$	e. $16 ÷ 10 = 1.6$
b. $5.6 ÷ 7 = 0.8$	d. $0.7 ÷ 10 = 0.07$	f. $71 ÷ 100 = 0.71$

26.

a. 0.2 m = 20 cm	b. 0.4 L = 400 ml	c. 56 oz = 3 lb 8 oz
37 cm = 0.37 m	3.5 kg = 3,500 g	74 in. = 6 ft 2 in.
2.9 km = 2,900 m	240 g = 0.24 kg	15 C = 3 qt 3 C

**27.** There are 444 milliliters in two bowls. Two liters is 2,000 ml. 2,000 ml ÷ 9 = 222.2 ml or about 222 ml.

28. a. 1.42 b. 14.28 b. 14.08

Graphs

29.

x	0	1	2	3	4	5
y	1	3	5	7	9	11
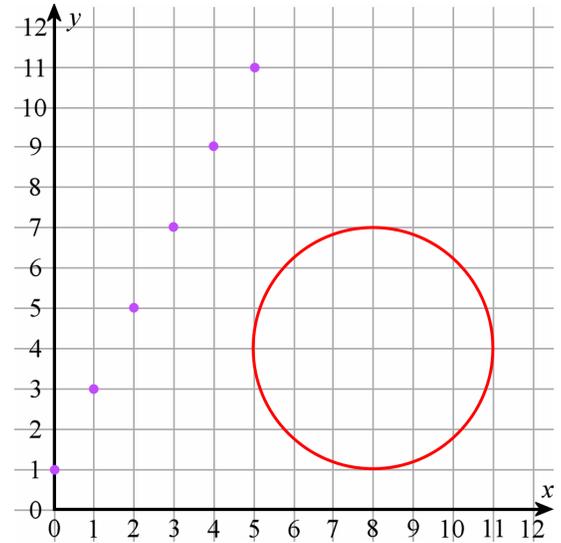
30. See the image on the right.

31.

Day	Sales (1000 dollars)
Mon	125
Tue	114
Wed	118
Thu	130
Fri	158

a. See the line graph on the right.

b. The average daily sales is $129,000.
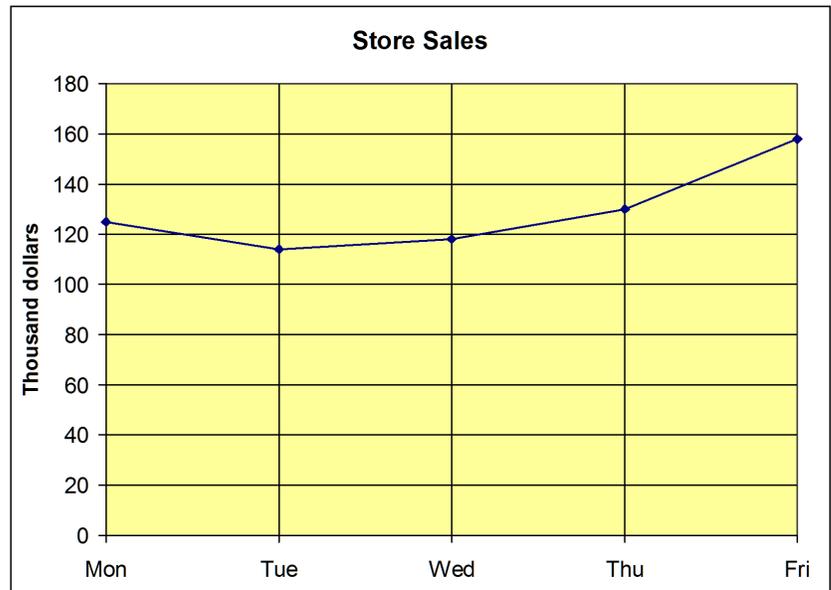
Fractions

32. a. 6 1/3
    b. 2 1/3
    c. 13 4/5

33.

34.
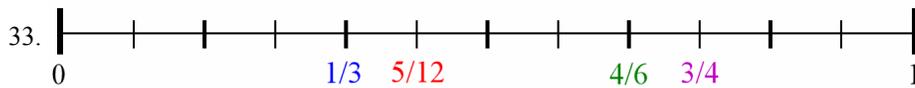
a. $\dfrac{5}{6} = \dfrac{}{20}$ (crossed out)	b. $\dfrac{2}{7} = \dfrac{8}{28}$	c. $\dfrac{3}{8} = \dfrac{15}{40}$	d. $\dfrac{2}{9} = \dfrac{6}{27}$

35. Mia found the common denominator (15) correctly, but forgot that the 2 fifths and the 2 thirds do not stay as 2 fifteenths in the conversion.

$$\frac{2}{5} + \frac{2}{3}$$
$$\downarrow \qquad \downarrow$$
$$\frac{6}{15} + \frac{10}{15} = 1\frac{1}{15}$$
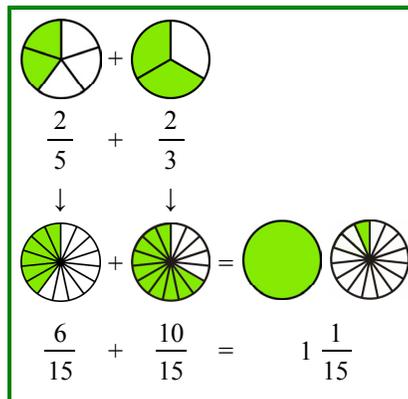
36. a. 1 1/6
    b. 7/15
    c. 5 5/8
    d. 10 5/18

37. You would need 3 × (2 3/4) = 8 1/4 cups of flour to make three batches of rolls.

38. a. $\dfrac{6}{9} > \dfrac{6}{13}$ b. $\dfrac{6}{13} < \dfrac{1}{2}$ c. $\dfrac{5}{10} > \dfrac{48}{100}$ d. $\dfrac{1}{4} = \dfrac{25}{100}$ e. $\dfrac{5}{7} > \dfrac{7}{10}$

39. a. 1 2/5
    b. cannot be simplified
    c. 7/8

40. Yes, it is correct. (2/3) × (1/2) = 1/3.

41.

a. $\dfrac{1}{3} \times \dfrac{5}{6} = \dfrac{5}{18}$ b. $\dfrac{2}{9} \times \dfrac{2}{3} = \dfrac{4}{27}$
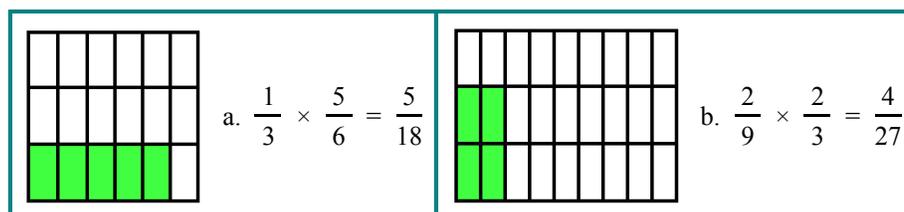
42. You can cut 60 pieces: 15 ft ÷ (1/4 ft) = 60.

43. 1/6 of the pizza. (1/2) ÷ 3 = 1/6

44. a. 10 1/2
   b. 1/21
    c. 2 14/15
    d. 18

Geometry

45. Answers may vary. If you printed the test yourself, your printer may have scaled the document to fit, instead of printing it at 100%. Please check the measurements the student has given as his or her answer. Two possible sets of answers are:

(Printed at 100%) The sides measure 3 1/8 in, 2 11/16 in, and 5 1/4 in. The perimeter is 11 1/16 in.

(Print to fit) The sides measure 2 15/16 in, 2 9/16 in, and 4 15/16 in. The perimeter is 10 7/16 in.

46. a. an isosceles acute triangle
    b. a rhombus
    c. a right scalene triangle
    d. a trapezoid

47. a. 9 m^2
    b. 20 ft

48. Yes, it is. A square has one pair of parallel sides, which is a definition of a trapezoid.
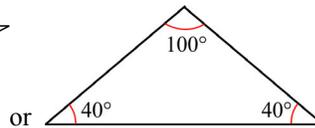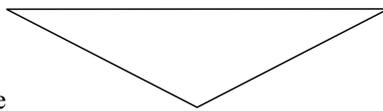
49. Yes, it can. For example   or

50. a. Check the triangles the student drew. The student should use a tool, such as a triangular ruler or a protractor, to make the right angle. The picture below may be slightly out of scale when printed, due to the possible scaling in the printing process.

    5 cm

    7 cm
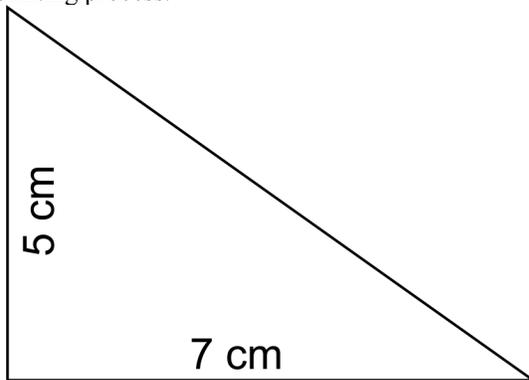
    b. 8.6 cm + 5 cm + 7 cm = 20.6 cm
    c. They measure 90 °, 36 °, and 54 °.

51. The volume is 5 cm × 10 cm × 4 cm = 200 cm^3.

52. a. 1.2 m × 0.6 m × 1 m = 0.72 m^3.
    b. 240 liters. 0.72 m^3 is 720 liters, and one-third of that is 240 liters.