Name: _____

REVIEW PRACTICE TEST

Math 7 Review

Multiple Choice

Identify the choice that best completes the statement or answers the question.

____ 1. Which number is a factor of 970?

a. 4 b. 6 c. 8 d. 10

____ 2. Determine the missing digit if 147□ is divisible by 2, but not by 10.

a. 0 b. 4 c. 5 d. 7

____ 3. Determine which fraction is the greatest.

a. $\frac{3}{8}$ c. $\frac{2}{5}$

b. $\frac{9}{10}$ d. $\frac{5}{7}$

____ 4. Identify an equivalent fraction for $\frac{27}{18}$ in lower terms.

a. $\frac{4}{3}$ c. $\frac{3}{2}$

b. $\frac{9}{6}$ d. $\frac{9}{2}$

____ 5. Calculate and identify the sum $\frac{2}{5} + 1\frac{4}{9}$.

a. $1\frac{14}{42}$ c. $1\frac{44}{55}$

b. $1\frac{36}{48}$ d. $1\frac{38}{45}$

____ 6. Calculate $241 \div 0.33$.

a. 730.30
b. 741.60
c. 796.90
d. 820.40

____ 7. How many of 50%, 60%, 70%, and 80% are greater than $\frac{17}{20}$?

a. 0
b. 1
c. 2
d. 3

____ 8. A parallelogram has a base of 5.70 cm and a height of 3.20 cm. What is the area of the parallelogram?

a. 18.24 cm^2
b. 21.72 cm^2
c. 23.51 cm^2
d. 24.32 cm^2

____ 9. A parallelogram has a height of 6 cm and an area of 42 cm^2. What is the base of the parallelogram?

a. 3 cm
b. 5 cm
c. 7 cm
d. 9 cm

____ 10. Determine the circumference of a circle with a radius of 11.0 mm.

a. 67.9 mm
b. 69.1 mm
c. 72.3 mm
d. 74.8 mm

____ 11. Estimate the area of a circle with a radius of 7.5 cm.

a. 164 cm^2
b. 170 cm^2
c. 177 cm^2
d. 181 cm^2

____ 12. Estimate the area of a circle with a radius of 8.3 cm using the formula $A = ?r^2$.

a. 216.4 cm^2
b. 216.9 cm^2
c. 217.5 cm^2
d. 217.8 cm^2

____ 13. Calculate (–20) – (+30).

a. –50
b. –10
c. +10
d. +50

____ 14. Calculate (–5) – (–3) – (–8).

a. 0
b. +2
c. +6
d. +9

____ 15. Plot and connect the points $A(1, 3)$, $B(1, 6)$, and $C(4, 3)$ on a Cartesian coordinate system. What polygon do they form?

a. triangle
b. line segment
c. rectangle
d. pentagon

____ 16. Plot and connect the points $D(–2, 1)$, $E(0, 1)$, $F(0, –1)$, and $G(–2, –1)$ on a Cartesian coordinate system. What polygon do they form?

a. triangle
b. square
c. rectangle
d. pentagon

____ 17. Plot and connect the points $A(3, –1)$, $B(4, 1)$, $C(5, –1)$, $D(5, –3)$, and $E(3, –3)$ on a Cartesian coordinate system. What polygon do they form?

a. triangle
b. square
c. rectangle
d. pentagon

____ 18. Plot and connect the points $R(–6, 5)$, $S(–7, 3)$, and $T(–5, 3)$ on a Cartesian coordinate system. What polygon do they form?

a. triangle
b. square
c. rectangle
d. pentagon

____ 19. $\triangle ABC$ has coordinates $A(1, 2)$, $B(2, 4)$, and $C(4, 2)$. Determine the coordinates of B' after a rotation 90° ccw around the origin.

a. (–2, 1)
c. (–2, 4)
b. (–4, 2)
d. (–4, 4)

____ 20. $\triangle ABC$ has coordinates $A(–4, –2)$, $B(–5, –4)$, and $C(–3, –4)$. Determine the coordinates of C' after a rotation 90° ccw around the point (0, –2).

a. (0, –6)
c. (2, –6)
b. (2, –5)
d. (2, –7)

____ 21. Line segment QS is bisected at R. QR is 10 cm long. How long is RS?

a. 5 cm
c. 20 cm
b. 10 cm
d. 100 cm

____ 22. What is the measure of an angle that is bisected into two 34° angles?

a. 17°
c. 51°
b. 44°
d. 68°

____ 23. Calculate the range of the set of data.

91, 50, 146, 84, 36, 123, 71

a. 110
c. 148
b. 132
d. 159

____ 24. Determine the mode of the set of data.

1, 3, 5, 4, 5, 3, 6, 6, 7, 3

a. 3
c. 6
b. 5
d. 7

____ 25. Identify the outlier in the set of data.

145, 149, 136, 134, 145, 130, 210, 145, 134, 131

a. 130
b. 136
c. 149
d. 210

____ 26. Identify the numerical coefficient in the pattern rule $s = 9n + 5$.

a. n
b. s
c. 5
d. 9

____ 27. Identify the constant term in the pattern rule $x = 6y + 2$.

a. 2
b. 6
c. x
d. y

____ 28. Identify the pattern rule that describes the following: the number of tiles is the sum of the figure number and 3.

a. $t = 3f + 10$
b. $t = f + 3$
c. $t = 3f$
d. $t = 3f + 1$

____ 29. Evaluate $3d - 2$ for $d = 3$.

a. 7
b. 8
c. 9
d. 10

____ 30. Evaluate $8(d - 3)$ for $d = 9$.

a. 40
b. 43
c. 46
d. 48

____ 31. Identify the linear relation represented by the table of values.

b	y
1	1
2	2
3	3
4	4

a. $y = 8b$
b. $y = 2b - 3$
c. $y = 3b + 4$
d. $y = b$

____ 32. Identify the linear relation represented by the table of values.

n	y
1	5
2	14
3	23
4	32

a. $y = 3n$
b. $y = 5n + 8$
c. $y = 9n - 4$
d. $y = n + 7$

____ 33. Determine the solution to the equation $100 - 5a = 40$.
a. 7
b. 12
c. 17
d. 22

____ 34. Solve $r = n + 13$ for $r = 21$ using a graph.
a. 2
b. 6
c. 8
d. 11

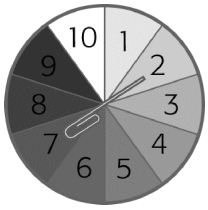
____ 35. Solve the equation $130 - 8x = 10$.
a. 15
b. 18
c. 22
d. 27

____ 36. Solve the equation $6a = 42$.

a. 1
b. 4
c. 7
d. 10

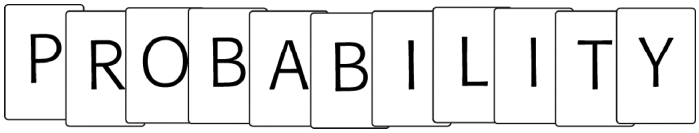
____ 37. Which ratio represents the theoretical probability of rolling an odd number on a 6-sided die?

a. 1:6
b. 2:6
c. 3:6
d. 4:6



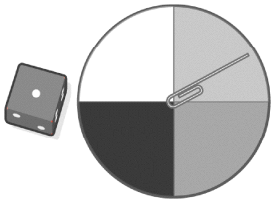
____ 38. Which fraction represents the theoretical probability of spinning a 7 on the spinner?

a. $\frac{1}{12}$
b. $\frac{1}{11}$
c. $\frac{1}{10}$
d. $\frac{1}{9}$



____ 39. Which percent represents the theoretical probability of choosing a letter that occurs twice in the word?

a. 36%
b. 55%
c. 64%
d. 91%



____ 40. Suppose you spin the spinner and then roll the die. Determine *P*(white and anything except 5).

a. $\frac{1}{24}$

b. $\frac{5}{24}$

c. $\frac{8}{24}$

d. $\frac{13}{24}$

____ 41. Brandon has three T-shirts: one red, one green, and one yellow. He has two pairs of shorts: one red and one black. What is the probability that Brandon will wear the yellow shirt with the red shorts?

a. $\frac{1}{6}$

b. $\frac{3}{6}$

c. $\frac{4}{6}$

d. $\frac{5}{6}$

____ 42. What is the theoretical probability of rolling an odd number on a die?

a. $\frac{1}{6}$

b. $\frac{2}{6}$

c. $\frac{3}{6}$

d. $\frac{4}{6}$

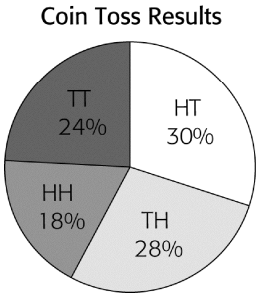
____ 43. Ling has a bag with one yellow, one blue, one green, and one red block. She removes a block from this bag, checks its colour, and puts it back. She then removes another block. What is the probability that she will remove the yellow block on her first try?

a. $\frac{2}{16}$

b. $\frac{3}{16}$

c. $\frac{4}{16}$

d. $\frac{5}{16}$



____ 44. Fatima graphed her results from tossing a coin twice. How many times was the result two tails if she did the experiment 100 times?

a. 9
b. 13
c. 18
d. 24

Short Answer

45. List $\frac{5}{6}$, $\frac{4}{9}$, and $\frac{2}{5}$ in order from least to greatest.

46. Rewrite $\frac{24}{42}$ in lower terms.

47. Write $\frac{2}{5}$ and $\frac{7}{9}$ as equivalent fractions with a common denominator.

48. Estimate 5.999 + 4.822 to the nearest whole number.

49. Calculate 14.18 – 12.65.

50. Calculate 12.3×2.7.

51. Write $\frac{1}{9}$ as a repeating decimal.

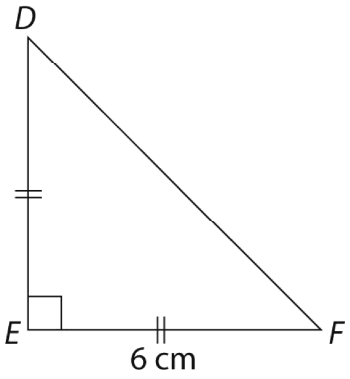
52. Complete the statement using >, <, or =.

$0.37 \square \frac{7}{20}$

53. Estimate 8% of 20.

54. Calculate 10% of 87.04.

55. Calculate the area of $\triangle DEF$.



56. Determine the circumference of a circle with a diameter of 5.7 m.

57. Determine the circumference of a circle with a radius of 7.9 cm.

58. Estimate the area of a circle with a radius of 3.6 cm.

59. Calculate (+10) + (–4) + (–6) + (+10).

60. Calculate (+1) – (–3).

61. $\triangle RST$ has coordinates $R(-5, 6)$, $S(-2, 6)$, and $T(-3, 3)$. Determine the coordinates of R' after a reflection across the y-axis.

62. A pentagon has coordinates $A(3, -2)$, $B(4, -4)$, $C(4, -6)$, $D(2, -6)$ and $E(2, -4)$. Determine the coordinates of B' after the pentagon is translated 3 units to the left and 3 units up.

63. Line segment GH is 3 m long. A perpendicular bisector intersects GH at J. How long is GJ?

64. AB is parallel to CD and EF. Is EF parallel to CD?

65. Identify the outlier in the set of data.
97, 91, 85, 88, 562, 102, 84, 100, 96, 92

66. Identify the numerical coefficient in the pattern rule $s = 4n + 3$.

67. Identify the constant term in the pattern rule $s = 2n + 3$.

68. Identify the pattern rule that describes the following: the number of tiles is the sum of the figure number and 1.

69. Evaluate $d + 8$ for $d = 3$.

70. Create a table of values for the linear relation $y = 7n + 2$.

71. Determine the solution to the equation $6 + a = 18$.

72. Determine the solution to the equation $a + 7 = 22$.

73. Make a table of values for this pattern. Write a pattern rule for the number of counters in each figure. Write an equation to determine which figure has 18 counters.

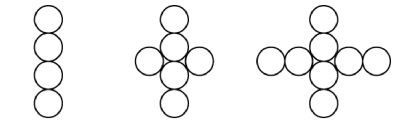
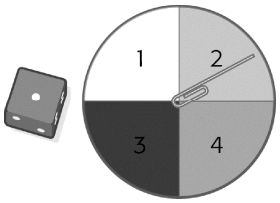


figure 1 figure 2 figure 3

74. Solve the equation $x + 2 = 9$.

75. Solve the equation $(-2) + x = 5$.

76. Solve the equation $6x = 78$.



77. Suppose you spin this spinner twice. List all possible outcomes in a tree diagram.

78. Ashley asked 50 Grade 7 students how many televisions they have in their home. What percent of the students surveyed have 1 television in their home?

Number of televisions	Number of students
0	1
1	13
2	24
3 or more	12

Problem

79. A truck is loaded with 285 kg of potatoes in bags of the same size. Could they be in 1 kg, 2 kg, 5 kg, or 10 kg bags? Explain.

80. Maria phoned $\frac{1}{6}$ of the track team members on her list last weekend. She phoned $\frac{1}{8}$ of the members on Saturday. What fraction of the team did she phone on Sunday? Explain.

81. Louie and his mom drove to Brandon and back. When they started, the gas tank was $\frac{7}{8}$ full. When they returned, the tank was $\frac{2}{5}$ full. What fraction of the gas in the tank did they use on the trip? Explain.

82. Jasmeet worked at the deli for 11 hours last week. Her pay cheque for the week was $90.75. How much is she paid for each hour of work? Explain.

83. Jelena forgot her lunch. Sasha offered Jelena 0.12 of her sandwich. Lauren offered Jelena $\frac{1}{10}$ of her sandwich. Who offered more? Explain.

84. Kai ate 0.23 of a pizza. Nicholas ate $\frac{1}{4}$ of a pizza. The pizzas are the same size. Who ate more pizza? Explain.

85. Brent ate 0.41 of a pizza. Nicole ate $\frac{4}{9}$ of a pizza. The pizzas are the same size. Who ate more pizza?

Explain.

86. A store offers a 15% early-bird discount on a watch that regularly costs $50. Calculate the total cost of the watch in Manitoba. Explain.

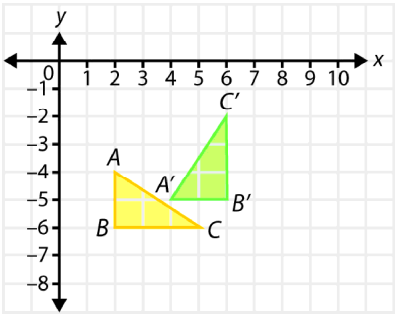
Province	PST
BC	7%
AB	0%
SK	7%
MB	7%

87. A new circular wading pool at the amusement park is tiled with a design on the bottom. The wading pool is 4.7 m across. Estimate the area that the tile will need to cover.

88. A rectangular wading pool at a park is 11 m by 13 m. There is a tiled border around the pool. The tile around the pool is 14 m by 16 m. What is the area of the tile around the pool? Explain.

89. Parallelogram A has a base of 9 cm and a perimeter of 30 cm. Parallelogram B has a base that is 4 cm longer and it is 5 cm higher. How much greater area does parallelogram B have? Explain.

90. Describe how $\triangle ABC$ was transformed to create $\triangle A'B'C'$.



91. $\triangle ABC$ has coordinates $A(10, 7)$, $B(10, 5)$, and $C(5, 5)$. Draw $\triangle ABC$ and construct a perpendicular bisector for each side of the triangle. What is the intersection point of the perpendicular bisectors?

92. Alexander recorded his golf scores each week for 4 months: 73, 127, 120, 111, 97, 119, 101, 130, 99, 123, 95, 115, 113, 120, 105, 111. Determine the mean, median, and mode of her scores. Which measure represents Alexander's golf score best? Explain.

93. Complete the table for the pattern and write a pattern rule using an algebraic expression to represent this relation.

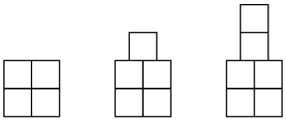


figure 1 figure 2 figure 3

Figure number	1	2	3	4	5
Number of squares	4	5			

94. Predict the number of tiles in figure 6 using a table of values. Write a pattern rule using an algebraic expression for the number tiles in any figure.

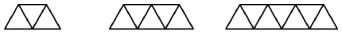
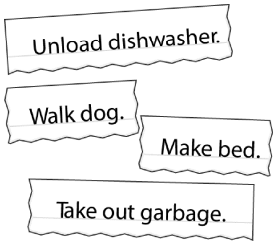


figure 1 figure 2 figure 3

95. A tool rental company rents a spray painter for a flat rate of $30 plus $7 per hour. Write an expression to represent the cost to rent the painter for any number of hours and determine the cost to rent the painter for 8 h. Explain.

96. Shirley can rent an electric lawn mower for $125. She charges $20 to mow a lawn. She wants to know how many lawns she needs to mow to earn enough money to buy a used guitar and amplifier priced at $375. Write an expression that relates Shirley's earnings to the number of lawns she mows. Write an equation to determine how many lawns Shirley needs to mow. Solve your equation.



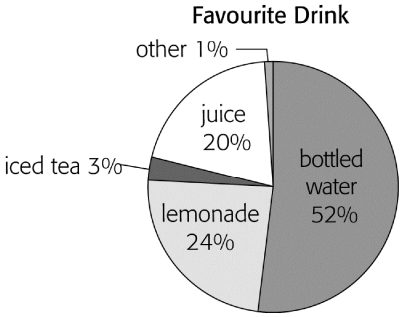
97. Each morning, Joseph is the first to take one of these 4 slips of paper from the family daily job jar. What is the probability that he will have to unload the dishwasher on both Monday and Tuesday?

98. Suppose you roll a 12-sided die and toss a coin. Determine the theoretical probability of rolling a number less than 4 and tossing heads. Do an experiment to calculate the experimental probability of rolling a number less than 4 and tossing heads.

99. This chart shows the colours of 100 cars in the parking lot of a supermarket. Display the data in a circle graph.

Colour of car	Number of cars of each colour
white	12
silver	28
black	29
red	16
blue	15

100. Daphne surveyed 40 students after gym class about what kind of drink they like best after exercising. She prepared a report to show the kinds of drinks that should be sold in the school cafeteria. Read his report and make suggestions for improvements.



To gather information about the kinds of drinks that should be sold in the school cafeteria, I surveyed 40 students.

96% of these students preferred bottled water, lemonade, or juice.

Since 52% preferred bottled water, it should definitely be sold.

A total of 44% preferred either lemonade or juice. This is close to the number of students who preferred water, so water should not be the only drink offered.

Math 7 Review
Answer Section

MULTIPLE CHOICE

1. ANS: D PTS: 1 DIF: Grade 7 REF: Lesson 1.1
   OBJ: N1 TOP: Divisibility by 10, 5, and 2 KEY: divisibility rule
2. ANS: B PTS: 1 DIF: Grade 7 REF: Lesson 1.1
   OBJ: N1 TOP: Divisibility by 10, 5, and 2 KEY: divisibility rule
3. ANS: B PTS: 1 DIF: Grade 7 REF: Lesson 2.1
   OBJ: N7 TOP: Comparing Fractions
   KEY: lowest terms | common denominators | fractions
4. ANS: C PTS: 1 DIF: Grade 7 REF: Lesson 2.1
   OBJ: N7 TOP: Comparing Fractions
   KEY: lowest terms | common denominators | fractions
5. ANS: D PTS: 1 DIF: Grade 7 REF: Lesson 2.11
   OBJ: N5 TOP: Communicate about Estimation Strategies
   KEY: mixed numbers | estimate
6. ANS: A PTS: 1 DIF: Grade 7 REF: Lesson 3.6
   OBJ: N2 TOP: Dividing by Numbers Less than 1 KEY: decimals
7. ANS: A PTS: 1 DIF: Grade 7 REF: Lesson 4.4
   OBJ: N3 TOP: Using Percents to Make Comparisons
   KEY: percents
8. ANS: A PTS: 1 DIF: Grade 7 REF: Lesson 5.1
   OBJ: SS2 TOP: Area of a Parallelogram KEY: area | parallelogram
9. ANS: C PTS: 1 DIF: Grade 7 REF: Lesson 5.1
   OBJ: SS2 TOP: Area of a Parallelogram KEY: area | parallelogram
10. ANS: B PTS: 1 DIF: Grade 7 REF: Lesson 5.4
    OBJ: SS1 TOP: Calculating Circumference KEY: circumference | circle
11. ANS: C PTS: 1 DIF: Grade 7 REF: Lesson 5.5
    OBJ: SS1, SS2 TOP: Estimating Area of a Circle KEY: area | circle
12. ANS: A PTS: 1 DIF: Grade 7 REF: Lesson 5.6
    OBJ: SS2 TOP: Area of a Circle KEY: area | circle
13. ANS: A PTS: 1 DIF: Grade 7 REF: Lesson 6.5
    OBJ: N6 TOP: Subtracting Integers Using Counters
    KEY: integers
14. ANS: C PTS: 1 DIF: Grade 7 REF: Lesson 6.5
    OBJ: N6 TOP: Subtracting Integers Using Counters
    KEY: integers
15. ANS: A PTS: 1 DIF: Grade 7 REF: Lesson 7.2
    OBJ: S4 TOP: Comparing Positions on a Grid KEY: transformations
16. ANS: B PTS: 1 DIF: Grade 7 REF: Lesson 7.2
    OBJ: S4 TOP: Comparing Positions on a Grid KEY: transformations
17. ANS: D PTS: 1 DIF: Grade 7 REF: Lesson 7.2
    OBJ: S4 TOP: Comparing Positions on a Grid KEY: transformations

18. ANS: A PTS: 1 DIF: Grade 7 REF: Lesson 7.2
OBJ: S4 TOP: Comparing Positions on a Grid KEY: transformations
19. ANS: B PTS: 1 DIF: Grade 7 REF: Lesson 7.4
OBJ: S5 TOP: Rotations KEY: transformations
20. ANS: B PTS: 1 DIF: Grade 7 REF: Lesson 7.4
OBJ: S5 TOP: Rotations KEY: transformations
21. ANS: B PTS: 1 DIF: Grade 7 REF: Lesson 7.6
OBJ: S3 TOP: Perpendicular Bisectors
KEY: geometric constructions | perpendicular
22. ANS: D PTS: 1 DIF: Grade 7 REF: Lesson 7.8
OBJ: S3 TOP: Angle Bisectors
KEY: geometric constructions | angle bisector
23. ANS: A PTS: 1 DIF: Grade 7 REF: Lesson 8.1
OBJ: SP1 TOP: The Range of a Set of Data KEY: data sets | range
24. ANS: A PTS: 1 DIF: Grade 7 REF: Lesson 8.2
OBJ: SP1 TOP: The Median and Mode of a Set of Data
KEY: data sets | mode
25. ANS: D PTS: 1 DIF: Grade 7 REF: Lesson 8.5
OBJ: SP2 TOP: Outliers KEY: data sets | outliers
26. ANS: D PTS: 1 DIF: Grade 7 REF: Lesson 9.1
OBJ: PR4 TOP: Writing a Pattern Rule KEY: patterns | relations
27. ANS: A PTS: 1 DIF: Grade 7 REF: Lesson 9.1
OBJ: PR4 TOP: Writing a Pattern Rule KEY: patterns | relations
28. ANS: B PTS: 1 DIF: Grade 7 REF: Lesson 9.1
OBJ: PR1 TOP: Writing a Pattern Rule KEY: patterns | relations
29. ANS: A PTS: 1 DIF: Grade 7 REF: Lesson 9.2
OBJ: PR5 TOP: Evaluating an Expression to Solve a Problem
KEY: patterns | relations
30. ANS: D PTS: 1 DIF: Grade 7 REF: Lesson 9.2
OBJ: PR5 TOP: Evaluating an Expression to Solve a Problem
KEY: patterns | relations
31. ANS: D PTS: 1 DIF: Grade 7 REF: Lesson 9.4
OBJ: PR2 TOP: Linear Relations and Their Graphs KEY: patterns | relations
32. ANS: C PTS: 1 DIF: Grade 7 REF: Lesson 9.4
OBJ: PR2 TOP: Linear Relations and Their Graphs KEY: patterns | relations
33. ANS: B PTS: 1 DIF: Grade 7 REF: Lesson 9.5
OBJ: PR7 TOP: Solving Equations Using Mental Mathematics
KEY: patterns | relations
34. ANS: C PTS: 1 DIF: Grade 7 REF: Lesson 9.7
OBJ: PR6 TOP: Solving Equations by Graphing KEY: patterns | relations
35. ANS: A PTS: 1 DIF: Grade 7 REF: Lesson 9.8
OBJ: PR7 TOP: Communicating the Solution of an Equation
KEY: patterns | relations
36. ANS: C PTS: 1 DIF: Grade 7 REF: Lesson 9.8
OBJ: PR7 TOP: Communicating the Solution of an Equation
KEY: patterns | relations

37. ANS: C PTS: 1 DIF: Grade 7 REF: Lesson 10.2
OBJ: SP4 TOP: Representing Probabilities as Fractions and Percents
KEY: favourable outcome | theoretical probability
38. ANS: C PTS: 1 DIF: Grade 7 REF: Lesson 10.2
OBJ: SP4 TOP: Representing Probabilities as Fractions and Percents
KEY: favourable outcome | theoretical probability
39. ANS: A PTS: 1 DIF: Grade 7 REF: Lesson 10.2
OBJ: SP4 TOP: Representing Probabilities as Fractions and Percents
KEY: favourable outcome | theoretical probability
40. ANS: B PTS: 1 DIF: Grade 7 REF: Lesson 10.3
OBJ: SP6 TOP: Probability of Independent Events KEY: sample space | independent events
41. ANS: A PTS: 1 DIF: Grade 7 REF: Lesson 10.5
OBJ: SP5 TOP: Using Tree Diagrams to Calculate Probability
KEY: tree diagram
42. ANS: C PTS: 1 DIF: Grade 7 REF: Lesson 10.6
OBJ: SP6 TOP: Comparing Theoretical and Experimental Probabilities
KEY: theoretical probability | experimental probability
43. ANS: C PTS: 1 DIF: Grade 7 REF: Lesson 10.6
OBJ: SP6 TOP: Comparing Theoretical and Experimental Probabilities
KEY: theoretical probability | experimental probability
44. ANS: D PTS: 1 DIF: Grade 7 REF: Lesson 11.1
OBJ: SP3 TOP: Interpreting Circle Graphs KEY: circle graph

SHORT ANSWER

45. ANS:
$\frac{2}{5}, \frac{4}{9}, \frac{5}{6}$

PTS: 1 DIF: Grade 7 REF: Lesson 2.1 OBJ: N7
TOP: Comparing Fractions KEY: lowest terms | common denominators | fractions
46. ANS:
$\frac{4}{7}$

PTS: 1 DIF: Grade 7 REF: Lesson 2.1 OBJ: N7
TOP: Comparing Fractions KEY: lowest terms | common denominators | fractions
47. ANS:
$\frac{18}{45}$ and $\frac{35}{45}$

PTS: 1 DIF: Grade 7 REF: Lesson 2.1 OBJ: N7
TOP: Comparing Fractions KEY: lowest terms | common denominators | fractions

48. ANS:
11

PTS: 1 DIF: Grade 7 REF: Lesson 3.2 OBJ: N2
TOP: Adding and Subtracting Decimals KEY: decimals | estimate

49. ANS:
1.53

PTS: 1 DIF: Grade 7 REF: Lesson 3.5 OBJ: N2
TOP: Solve Problems Using Guessing and Testing KEY: decimals

50. ANS:
33.21

PTS: 1 DIF: Grade 7 REF: Lesson 3.5 OBJ: N2
TOP: Solve Problems Using Guessing and Testing KEY: decimals

51. ANS:
$0.\overline{1}$

PTS: 1 DIF: Grade 7 REF: Lesson 3.9 OBJ: N4
TOP: Expressing Fractions as Decimals KEY: fractions | decimals | repeating decimal

52. ANS:
>

PTS: 1 DIF: Grade 7 REF: Lesson 4.1 OBJ: N3
TOP: Percents as Fractions and Decimals KEY: fractions | decimals

53. ANS:
e.g., 2

PTS: 1 DIF: Grade 7 REF: Lesson 4.3 OBJ: N3
TOP: Estimating Percents KEY: percents | estimate

54. ANS:
8.704

PTS: 1 DIF: Grade 7 REF: Lesson 4.6 OBJ: N3
TOP: Solving Problems that Involve Decimals
KEY: decimals | percents | proportion | rounding

55. ANS:
18 cm^2

PTS: 1 DIF: Grade 7 REF: Lesson 5.2 OBJ: SS2
TOP: Area of a Triangle KEY: area | triangle

56. ANS:
17.9 m

PTS: 1 DIF: Grade 7 REF: Lesson 5.4 OBJ: SS1
TOP: Calculating Circumference KEY: circumference | circle

57. ANS:
49.6 cm

PTS: 1 DIF: Grade 7 REF: Lesson 5.4 OBJ: SS1
TOP: Calculating Circumference KEY: circumference | circle

58. ANS:
41.0 cm^2

PTS: 1 DIF: Grade 7 REF: Lesson 5.5 OBJ: SS1, SS2
TOP: Estimating Area of a Circle KEY: area | circle

59. ANS:
+10

PTS: 1 DIF: Grade 7 REF: Lesson 6.4 OBJ: N6
TOP: Integer Addition Strategies KEY: integers

60. ANS:
+4

PTS: 1 DIF: Grade 7 REF: Lesson 6.5 OBJ: N6
TOP: Subtracting Integers Using Counters KEY: integers

61. ANS:
(5, 6)

PTS: 1 DIF: Grade 7 REF: Lesson 7.3 OBJ: S5
TOP: Translations and Reflections KEY: transformations

62. ANS:
(1, –1)

PTS: 1 DIF: Grade 7 REF: Lesson 7.3 OBJ: S5
TOP: Translations and Reflections KEY: transformations

63. ANS:
1.5 m

PTS: 1 DIF: Grade 7 REF: Lesson 7.6 OBJ: S3
TOP: Perpendicular Bisectors KEY: geometric constructions | perpendicular

64. ANS:
Yes

PTS: 1 DIF: Grade 7 REF: Lesson 7.7 OBJ: S3
TOP: Parallel Lines KEY: geometric constructions | parallel

65. ANS:
562

PTS: 1 DIF: Grade 7 REF: Lesson 8.5 OBJ: SP2
TOP: Outliers KEY: data sets | outliers

66. ANS:
4

PTS: 1 DIF: Grade 7 REF: Lesson 9.1 OBJ: PR4
TOP: Writing a Pattern Rule KEY: patterns | relations

67. ANS:
3

PTS: 1 DIF: Grade 7 REF: Lesson 9.1 OBJ: PR4
TOP: Writing a Pattern Rule KEY: patterns | relations

68. ANS:
$t = f + 1$

PTS: 1 DIF: Grade 7 REF: Lesson 9.1 OBJ: PR1
TOP: Writing a Pattern Rule KEY: patterns | relations

69. ANS:
11

PTS: 1 DIF: Grade 7 REF: Lesson 9.2 OBJ: PR5
TOP: Evaluating an Expression to Solve a Problem KEY: patterns | relations

70. ANS:

n	1	2	3	4	5
$y = 7n + 2$	9	16	23	30	37

PTS: 1 DIF: Grade 7 REF: Lesson 9.4 OBJ: PR2
TOP: Linear Relations and Their Graphs KEY: patterns | relations

71. ANS:
12

PTS: 1 DIF: Grade 7 REF: Lesson 9.5 OBJ: PR6
TOP: Solving Equations Using Mental Mathematics KEY: patterns | relations

72. ANS:
15

PTS: 1 DIF: Grade 7 REF: Lesson 9.5 OBJ: PR6
TOP: Solving Equations Using Mental Mathematics KEY: patterns | relations

73. ANS:
Figure: 1, 2, 3; Number of counters: 4, 6, 8; e.g., $s = 2n + 2$; $2n + 2 = 18$; figure 8 has 18 counters.

PTS: 1 DIF: Grade 7 REF: Lesson 9.7 OBJ: PR2
TOP: Solving Equations by Graphing KEY: patterns | relations

74. ANS:
7

PTS: 1 DIF: Grade 7 REF: Lesson 9.8 OBJ: PR6
TOP: Communicating the Solution of an Equation KEY: patterns | relations

75. ANS:
7

PTS: 1 DIF: Grade 7 REF: Lesson 9.8 OBJ: PR6
TOP: Communicating the Solution of an Equation KEY: patterns | relations

76. ANS:
13

PTS: 1 DIF: Grade 7 REF: Lesson 9.8 OBJ: PR7
TOP: Communicating the Solution of an Equation KEY: patterns | relations

77. ANS:
1-1, 1-2, 1-3, 1-4; 2-1, 2-2, 2-3, 2-4; 3-1, 3-2, 3-3, 3-4; 4-1, 4-2, 4-3, 4-4

PTS: 1 DIF: Grade 7 REF: Lesson 10.5 OBJ: SP5
TOP: Using Tree Diagrams to Calculate Probability KEY: tree diagram

78. ANS:
26%

PTS: 1 DIF: Grade 7 REF: Lesson 11.3 OBJ: SP3
TOP: Constructing Circle Graphs KEY: circle graph

PROBLEM

79. ANS:
1 kg or 5 kg, because 285 is divisible by 1 and 5.

PTS: 1 DIF: Grade 7 REF: Lesson 1.1 OBJ: N1
TOP: Divisibility by 10, 5, and 2 KEY: divisibility rule

80. ANS:
$\frac{1}{24}; \frac{1}{6} - \frac{1}{8} = \frac{1}{24}$

PTS: 1 DIF: Grade 7 REF: Lesson 2.6 OBJ: N5
TOP: Subtracting Fractions with Grids KEY: common denominators | fractions

81. ANS:
$\frac{19}{40}; \frac{7}{8} - \frac{2}{5} = \frac{19}{40}$

PTS: 1 DIF: Grade 7 REF: Lesson 2.6 OBJ: N5
TOP: Subtracting Fractions with Grids KEY: common denominators | fractions

82. ANS:
\$8.25; 90.75 ÷ 11 = 8.25

PTS: 1 DIF: Grade 7 REF: Lesson 3.7 OBJ: N2
TOP: Dividing by Numbers Greater than 1 KEY: decimals

83. ANS:

Sasha; $0.12 > \frac{1}{10}$

PTS: 1 DIF: Grade 7 REF: Lesson 3.10 OBJ: N4
TOP: Expressing Decimals as Fractions KEY: decimals | fractions | terminating decimal

84. ANS:

Nicholas; $\frac{1}{4} > 0.23$

PTS: 1 DIF: Grade 7 REF: Lesson 3.10 OBJ: N4
TOP: Expressing Decimals as Fractions KEY: decimals | fractions | terminating decimal

85. ANS:

Nicole; $\frac{4}{9} > 0.41$

PTS: 1 DIF: Grade 7 REF: Lesson 3.10 OBJ: N4
TOP: Expressing Decimals as Fractions
KEY: decimals | fractions | terminating decimal | repeating decimal

86. ANS:

\$34.50; 15% of 50 is 7.50 so the sale price is 50 – 7.50 = 42.50.
$42.50 \times 0.12 = 5.10$, so the total cost is 42.50 + 5.10 = 47.60

PTS: 1 DIF: Grade 7 REF: Lesson 4.6 OBJ: N3
TOP: Solving Problems that Involve Decimals
KEY: decimals | percents | proportion | rounding

87. ANS:

about 17.3 m^2

PTS: 1 DIF: Grade 7 REF: Lesson 5.5 OBJ: SS1, SS2
TOP: Estimating Area of a Circle KEY: area | circle

88. ANS:

The tiled area includes the area of the outside minus the area of the pool.
area of tile = area of rectangle – area of pool
= (14 m × 16 m) – (11 m × 13 m)
= 224 m^2 – 143 m^2
= 81 m^2

PTS: 1 DIF: Grade 7 REF: Lesson 5.7 OBJ: SS1
TOP: Solve Problems Using Diagrams KEY: area | rectangle

89. ANS:
To have maximum areas, both parallelograms must be rectangles.
height of A = (30 cm – 9 cm – 9 cm) ÷ 2
= 12 cm ÷ 2
= 6 cm
area of A = 9 cm × 6 cm
= 54 cm^2
area of B = 13 cm × 11 cm
= 143 cm^2
difference in area = 143 cm^2 – 54 cm^2
= 89 cm^2

PTS: 1 DIF: Grade 7 REF: Lesson 5.7 OBJ: SS1
TOP: Solve Problems Using Diagrams KEY: area | parallelogram

90. ANS:
e.g., *C*' is above *A*' and *B*'. To get *C* above *A* and *B*, rotate $\triangle ABC$ 90° ccw around vertex *A*. To get the rotated image of $\triangle ABC$ over to the right and down, translate it 2 units to the right and 1 unit down.

PTS: 1 DIF: Grade 7 REF: Lesson 7.5 OBJ: S5
TOP: Communicating about Transformations KEY: transformations

91. ANS:
(7.5, 6)

PTS: 1 DIF: Grade 7 REF: Lesson 7.6 OBJ: S3
TOP: Perpendicular Bisectors KEY: geometric constructions | perpendicular

92. ANS:
mean: 110, median: 112, mode: 111 and 120; e.g., the mean, median, or mode represent his scores in a similar way.

PTS: 1 DIF: Grade 7 REF: Lesson 8.6 OBJ: SP1
TOP: Communicate About Data KEY: data sets | mean | median | mode

93. ANS:
6, 7, 8; $s = f + 3$

PTS: 1 DIF: Grade 7 REF: Lesson 9.1 OBJ: PR1
TOP: Writing a Pattern Rule KEY: patterns | relations

94. ANS:
13; $s = 2f + 1$

PTS: 1 DIF: Grade 7 REF: Lesson 9.1 OBJ: PR1
TOP: Writing a Pattern Rule KEY: patterns | relations

95. ANS:
e.g., $7h + 30$, \$86; $7(8) + 30 = 56 + 30 = 86$.

PTS: 1 DIF: Grade 7 REF: Lesson 9.2 OBJ: PR5
TOP: Evaluating an Expression to Solve a Problem KEY: patterns | relations

96. ANS:
$20n$; $n = 25$ so 25 lawns; $125 + 375 = 500$ and $20(25) = 500$.

PTS: 1 DIF: Grade 7 REF: Lesson 9.7 OBJ: PR2
TOP: Solving Equations by Graphing KEY: patterns | relations

97. ANS:
$\frac{1}{16}$

PTS: 1 DIF: Grade 7 REF: Lesson 10.4 OBJ: SP5
TOP: Solve Problems Using Organized Lists KEY: sample space | organized list

98. ANS:
theoretical probability = $\frac{3}{24}$ or $\frac{1}{8}$; e.g., experimental probability = $\frac{5}{24}$

PTS: 1 DIF: Grade 7 REF: Lesson 10.6 OBJ: SP6
TOP: Comparing Theoretical and Experimental Probabilities
KEY: theoretical probability | experimental probability

99. ANS:
Graphs may vary. e.g., Circle graph titled 'Car Colours in a Parking Lot' with section labels 'white 12%' (43.2°), 'silver 28%' (100.8°), 'black 29%' (104.4°), 'red 16%' (57.6°), and 'blue 15%' (54°).

PTS: 1 DIF: Grade 7 REF: Lesson 11.3 OBJ: SP3
TOP: Constructing Circle Graphs KEY: circle graph

100. ANS:
e.g., Add that you surveyed students coming out of gym class since they just finished exercising and would be thirsty. Add a conclusion recommending that bottled water, lemonade, and juice should be sold.

PTS: 1 DIF: Grade 7 REF: Lesson 11.4 OBJ: SP3
TOP: Communicate about Circle Graphs KEY: circle graph

Math 7 Review [Answer Strip] **ID: A**

D 1.

B 2.

B 3.

C 4.

D 5.

A 6.

A 7.

A 8.

C 9.

B 10.

C 11.

A 12.

A 13.

C 14.

A 15.

B 16.

D 17.

A 18.

B 19.

B 20.

B 21.

D 22.

A 23.

A 24.

D 25.

D 26.

A 27.

B 28.

A 29.

D 30.

Math 7 Review [Answer Strip] **ID: A**

__D__ 31.

__C__ 32.

__B__ 33.

__C__ 34.

__A__ 35.

__C__ 36.

__C__ 37.

__C__ 38.

__A__ 39.

__B__ 40.

__C__ 42.

__C__ 43.

__D__ 44.