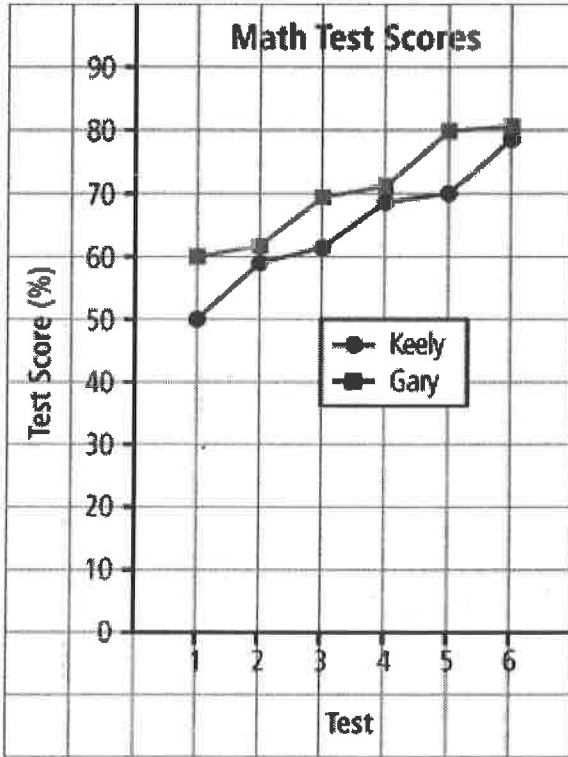


### Practice Final

#### Multiple Choice

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



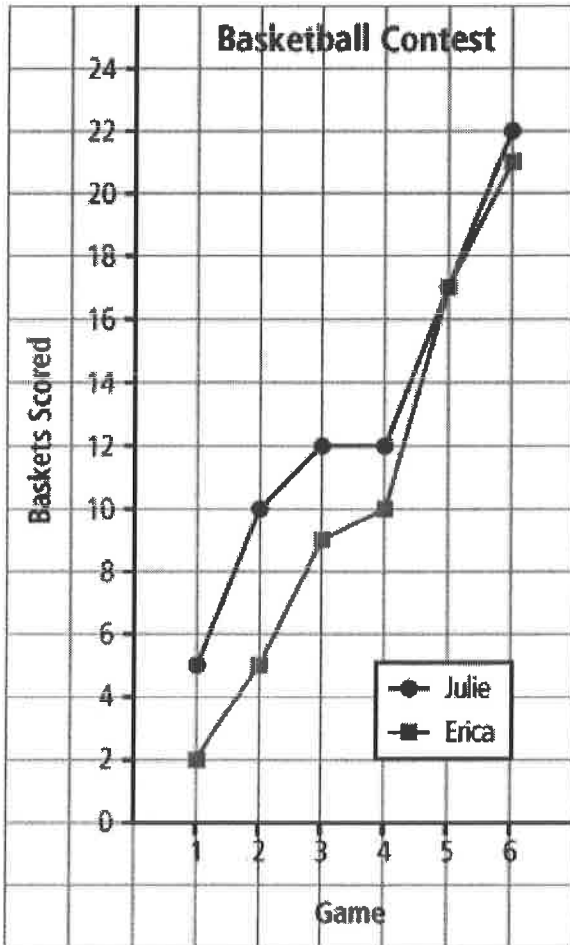
- \_\_\_\_\_ 1. What second type of graph could you use to compare Gary and Keely's scores across the tests?
  - a. circle graph
  - b. double bar graph
  - c. line graph
  - d. pictograph
  
- \_\_\_\_\_ 2. Double line graphs are best for
  - a. comparing data over time
  - b. comparing data that can be easily counted
  - c. comparing two sets of data
  - d. comparing two sets of data over time

Name: \_\_\_\_\_

ID: A



3. A coach wants to show how many shots each player is making compared to the total number of shots made by members of the team. Which graph would be the most useful?
- a. bar graph
  - b. circle graph
  - c. line graph
  - d. pictograph



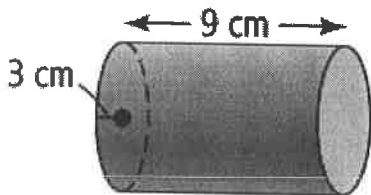
- \_\_\_\_\_ 4. Based on the information in the graph, by the end of game six
- both girls have improved by the same amount
  - Erica has improved more than Julie
  - Julie has improved more than Erica
  - neither girl has improved
- \_\_\_\_\_ 5. Determine the value of  $x$  if  $9:7 = x:42$ .
- 7
  - 21
  - 27
  - 54
- \_\_\_\_\_ 6. Determine the value of  $x$  if  $\frac{x}{48} = \frac{7}{3}$ .
- 16
  - 32
  - 80
  - 112
- \_\_\_\_\_ 7. Eric is able to stop 85% of the shots on goal. If he faces 27 shots on goal, how many goals would likely be scored on him?
- 3
  - 4
  - 9
  - 15
- \_\_\_\_\_ 8. Karen earns 15% commission selling equipment at a computer store. If she sells equipment worth a total of \$2956.50, how much commission will she earn?
- \$147.83
  - \$295.65
  - \$443.48
  - \$591.30

Name: \_\_\_\_\_

ID: A

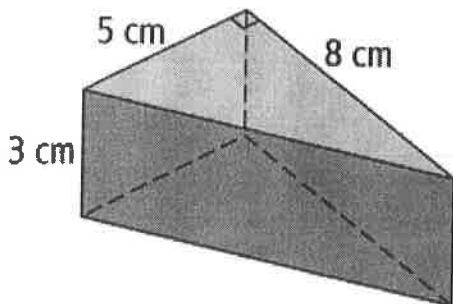
9. Sonny wants to buy a Vancouver Canucks sweater that is on sale. The regular price is \$94.00, but the sale gives him 35% off. What is the sale price of the sweater?
- a. \$32.90      b. \$61.10      c. \$94.00      d. \$105.20

10. The total surface area of this 3-D object is



- a.  $169.56 \text{ cm}^2$       b.  $197.82 \text{ cm}^2$       c.  $226.08 \text{ cm}^2$       d.  $282.6 \text{ cm}^2$
11. Determine  $\frac{4}{5} - \left(\frac{5}{6} - \frac{3}{4}\right) \times 4$ .
- a.  $\frac{4}{21}$       b.  $\frac{7}{15}$       c.  $2\frac{1}{2}$       d. 4

12. Find the volume of this right triangular prism.



- a.  $60 \text{ cm}^3$       b.  $90 \text{ cm}^3$       c.  $120 \text{ cm}^3$       d.  $150 \text{ cm}^3$
13. A triangular prism has a base area of  $7.3 \text{ cm}^2$  and a volume of  $71.54 \text{ cm}^3$ . The height of the prism must be
- a. 3.65 cm      b. 7.3 cm      c. 9.8 cm      d. 19.6 cm
14. A wedge of cheese is shaped like a right triangular prism. The triangular ends have a base of 46 mm and a height of 58 mm. If the total volume of cheese is  $32\,016 \text{ mm}^3$ , what is the height of the prism?
- a. 6 mm      b. 12 mm      c. 24 mm      d. 48 mm
15. A backyard composter is a right rectangular prism measuring  $1.8 \text{ m} \times 1.8 \text{ m} \times 1.3 \text{ m}$ . What is the total volume of material that can be placed in the composter?
- a.  $2.34 \text{ m}^3$       b.  $3.042 \text{ m}^3$       c.  $4.212 \text{ m}^3$       d.  $4.4 \text{ m}^3$
16. A piece of fudge in the shape of a right triangular prism has a base with an area of  $52.8 \text{ cm}^2$ . If the volume of the piece is  $290.4 \text{ cm}^3$ , what is its height?
- a. 2.75 cm      b. 4.5 cm      c. 5.5 cm      d. 6.5 cm
17. Two coins are tossed simultaneously. What is the probability of tossing two heads?
- a. 25%      b. 50%      c. 75%      d. 100%

Name: \_\_\_\_\_

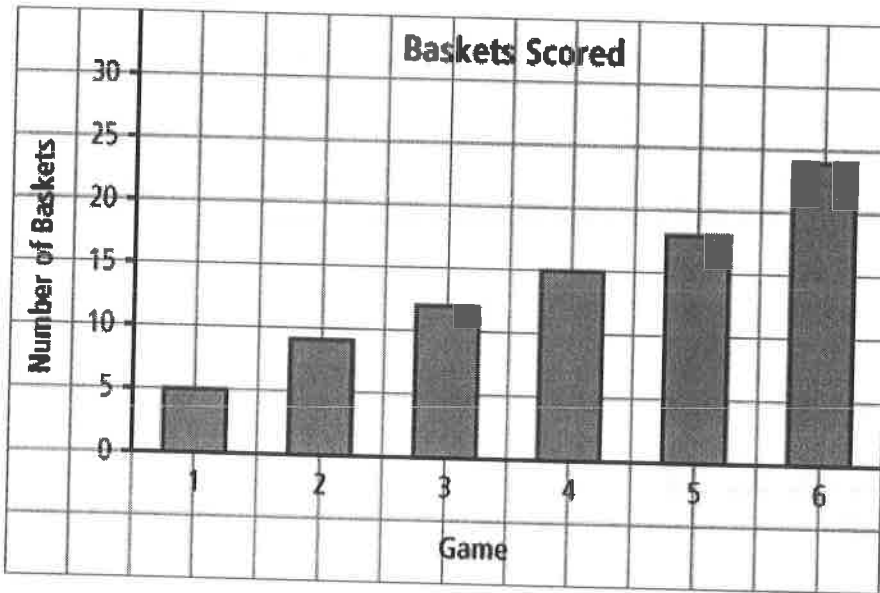
ID: A

- \_\_\_\_\_ 18. Two six-sided dice are rolled. What is the probability of rolling the same number on both dice?
- a.  $\frac{1}{36}$                       b.  $\frac{5}{36}$                       c.  $\frac{1}{6}$                       d.  $\frac{1}{4}$
- \_\_\_\_\_ 19. You have two small bags, each containing a quarter, a dime, a nickel, and a penny. If a coin is drawn from each bag, what is the probability that their value will be greater than 25 cents?
- a. 12.5%                      b. 25%                      c. 43.75%                      d. 50%

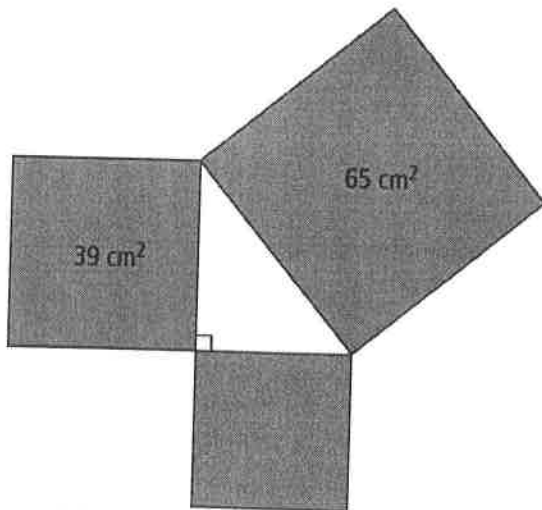
*Choose the best answer.*



- \_\_\_\_\_ 20. Pictographs are best for
- a. comparing data across categories
- b. comparing two sets of data across categories
- c. comparing categories to the whole using percents
- d. comparing data that can be easily counted and represented using symbols

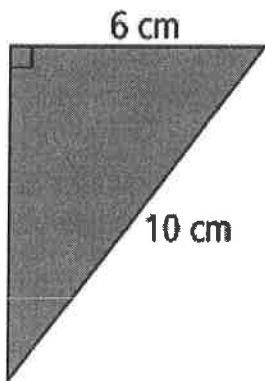


21. What type of graph could be used to show whether the player was progressing over time?
- circle graph
  - double bar graph
  - line graph
  - pictograph
22. A photo has a width to length ratio of 2:3. If the width of the photo is 4.8 cm, the length of the photo is
- 3.2 cm
  - 5.6 cm
  - 7.2 cm
  - 14.4 cm
23. The grocery store sells mustard in different sizes of bottles: 275 mL for \$2.10, 500 mL for \$3.90, 750 mL for \$5.10, and 1 L for \$6.90. Which size is the best buy?
- 275 mL
  - 500 mL
  - 750 mL
  - 1 L
24. Use the Pythagorean relationship to find the unknown area of the square.

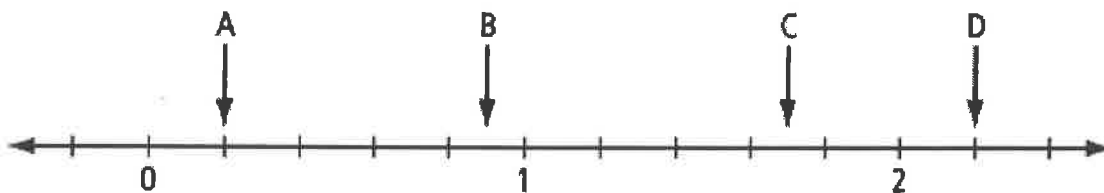


- $26 \text{ cm}^2$
- $25 \text{ cm}^2$
- $104 \text{ cm}^2$
- $2535 \text{ cm}^2$

- \_\_\_ 25. Determine the missing side length.



- a. 5 cm  
b. 6 cm  
c. 7 cm  
d. 8 cm
- \_\_\_ 26. Which set of dimensions belongs to a right triangle?  
a. 2 cm, 4 cm, 6 cm  
b. 6 cm, 6 cm, 9 cm  
c. 10 cm, 5 cm, 15 cm  
d. 12 cm, 5 cm, 13 cm
- \_\_\_ 27. Where on this number line is the approximate value of  $\sqrt{3}$  located?



- a. A  
b. B  
c. C  
d. D
- \_\_\_ 28. Express  $\frac{15}{50}$  as a decimal.  
a. 0.03  
b. 0.15  
c. 0.30  
d. 0.75
- \_\_\_ 29. Which fraction is the same as 12%?  
a.  $\frac{3}{25}$   
b.  $\frac{8}{64}$   
c.  $\frac{12}{10}$   
d.  $\frac{12}{1}$
- \_\_\_ 30. Lori receives a  $4\frac{1}{2}\%$  commission for selling a house that costs \$175 000. How much commission will she receive?  
a. \$74.38  
b. \$743.75  
c. \$7437.50  
d. \$74 375.00

Name: \_\_\_\_\_

ID: A

- \_\_\_ 31. If GST is 5%, how much GST will Janine pay on a jacket that costs \$125?
- a. \$6.25
  - b. \$62.50
  - c. \$131.25
  - d. \$187.50

- \_\_\_ 32. Determine  $3 \times \frac{5}{18}$ , in lowest terms.
- a.  $\frac{5}{6}$
  - b.  $\frac{5}{9}$
  - c.  $\frac{5}{18}$
  - d.  $\frac{5}{54}$

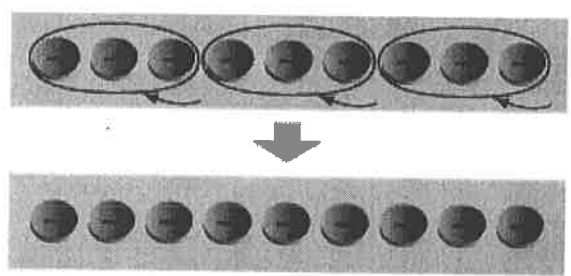
- \_\_\_ 33. Calculate  $\frac{6}{21} \times \frac{3}{2}$ . Express your answer in lowest terms.
- a.  $\frac{3}{7}$
  - b.  $\frac{1}{3}$
  - c.  $\frac{3}{14}$
  - d.  $\frac{3}{19}$

- \_\_\_ 34. Calculate  $12 \div \frac{3}{4}$ .
- a.  $\frac{1}{16}$
  - b.  $\frac{1}{9}$
  - c. 9
  - d. 16

- \_\_\_ 35. Determine  $\frac{4}{9} + \frac{1}{6} \times \frac{2}{3}$ . Express your answer in lowest terms.
- a.  $\frac{5}{6}$
  - b.  $\frac{7}{9}$
  - c.  $\frac{11}{18}$
  - d.  $\frac{5}{9}$

- \_\_\_ 36. Which set of dimensions belongs to a right rectangular prism with a volume of  $440 \text{ cm}^3$ ?
- a.  $6 \text{ cm} \times 12 \text{ cm} \times 5 \text{ cm}$
  - b.  $7 \text{ cm} \times 9 \text{ cm} \times 6 \text{ cm}$
  - c.  $8 \text{ cm} \times 5 \text{ cm} \times 11 \text{ cm}$
  - d.  $12 \text{ cm} \times 2 \text{ cm} \times 5 \text{ cm}$

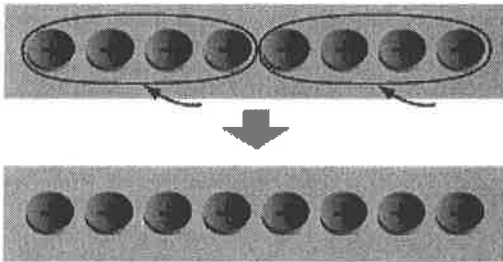
- \_\_\_ 37. What multiplication statement does this diagram represent?



- a.  $3 \times 3 = 9$
- b.  $-3 \times 3 = -9$
- c.  $-3 \times (-3) = 9$
- d.  $-3 \times (-3) = -9$

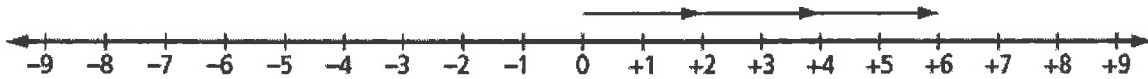


38. Determine which multiplication statement this diagram represents.



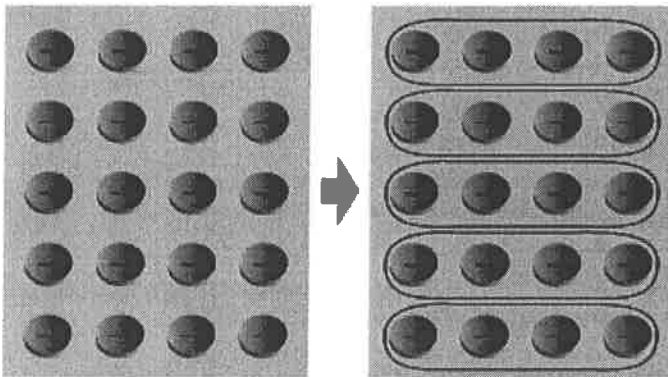
- a.  $-2 \times (-4) = 8$
- b.  $2 \times (-4) = -8$
- c.  $2 \times 4 = -8$
- d.  $2 \times 4 = 8$

39. Determine which multiplication statement this diagram represents.



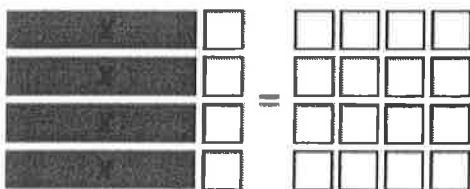
- a.  $3 \times 2 = 6$
- b.  $3 \times 2 = -6$
- c.  $-3 \times 2 = -6$
- d.  $(-3) \times (-2) = 6$

40. Determine which expression is equivalent to the diagram show below.



- a.  $-20 \div 4 = -5$
- b.  $-20 \div 5 = -4$
- c.  $-20 \div (-4) = -4$
- d.  $-20 \div (-5) = -4$

41. If a shaded tile represents a negative variable and a white tile represents a positive variable, what is the solution to the equation being modelled by this diagram?

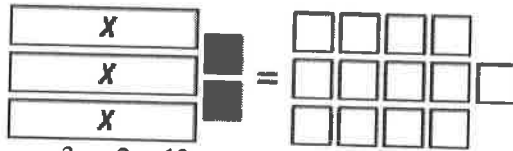


- a. 3
- b. -3
- c. 4
- d. -4

Name: \_\_\_\_\_

ID: A

- \_\_\_\_\_ 42. If a shaded tile represents a negative variable and a white tile represents a positive variable, what equation is this diagram modelling?



- a.  $3x - 2 = 13$                       c.  $3x - 2 = -13$   
b.  $3x + 2 = 13$                       d.  $3x + 2 = -13$

- \_\_\_\_\_ 43. Solve the equation  $12y + 20 = 44$ .

- a.  $y = 2$                                       c.  $y = 20$   
b.  $y = 12$                                   d.  $y = 24$

- \_\_\_\_\_ 44. Two identical spinners each have five equal sectors numbered 1 to 5. What is the probability of getting a sum of seven when you spin both spinners?

- a.  $\frac{4}{25}$                       b.  $\frac{1}{5}$                       c.  $\frac{1}{4}$                       d.  $\frac{7}{25}$

- \_\_\_\_\_ 45. A spinner divided into six equal parts has three green parts, two purple parts, and one white part. What is the probability of spinning green twice in two spins?

- a.  $\frac{1}{6}$                       b.  $\frac{1}{4}$                       c.  $\frac{1}{3}$                       d.  $\frac{1}{2}$

## Practice Final Answer Section

### MULTIPLE CHOICE

1. ANS: B                   PTS: 1                   DIF: Average           OBJ: Section 1.1  
NAT: SP1                TOP: Advantages and Disadvantages of Different Graphs  
KEY: bar graph
2. ANS: D                   PTS: 1                   DIF: Difficult          OBJ: Section 1.1  
NAT: SP1                TOP: Advantages and Disadvantages of Different Graphs  
KEY: double line graph | advantages
3. ANS: B                   PTS: 1                   DIF: Average           OBJ: Section 1.1  
NAT: SP1                TOP: Advantages and Disadvantages of Different Graphs  
KEY: circle graph | advantages
4. ANS: B                   PTS: 1                   DIF: Average           OBJ: Section 1.3  
NAT: SP1                TOP: Critiquing Data Presentation       KEY: double line graph
5. ANS: D                   PTS: 1                   DIF: Difficult          OBJ: Section 2.1 | Section 2.3  
NAT: N5                 TOP: Two-Term and Three-Term Ratios | Proportional Reasoning  
KEY: ratio
6. ANS: D                   PTS: 1                   DIF: Difficult          OBJ: Section 2.1 | Section 2.3  
NAT: N5                 TOP: Two-Term and Three-Term Ratios | Proportional Reasoning  
KEY: ratio
7. ANS: B                   PTS: 1                   DIF: Average           OBJ: Section 2.3  
NAT: N5                 TOP: Proportional Reasoning           KEY: probability | percent
8. ANS: C                   PTS: 1                   DIF: Average           OBJ: Section 2.2  
NAT: N5                 TOP: Rates               KEY: commission | rate | percent
9. ANS: B                   PTS: 1                   DIF: Average           OBJ: Section 2.2  
NAT: N5                 TOP: Rates               KEY: rate | discount | percent
10. ANS: C                  PTS: 1                   DIF: Average           OBJ: Section 5.4  
NAT: SS3                TOP: Surface Area of a Cylinder       KEY: cylinder | surface area | radius
11. ANS: B                   PTS: 1                   DIF: Average           OBJ: Section 6.6  
NAT: N6                 TOP: Applying Fraction Operations  
KEY: order of operations | mixed numbers | multiplication
12. ANS: A                  PTS: 1                   DIF: Average           OBJ: Section 7.2  
NAT: SS4                TOP: Volume of a Prism               KEY: volume | right triangular prism
13. ANS: C                  PTS: 1                   DIF: Difficult          OBJ: Section 7.2  
NAT: SS4                TOP: Volume of a Prism               KEY: height | right triangular prism
14. ANS: C                  PTS: 1                   DIF: Difficult          OBJ: Section 7.2  
NAT: SS4                TOP: Volume of a Prism               KEY: height | right triangular prism
15. ANS: C                  PTS: 1                   DIF: Average           OBJ: Section 7.2  
NAT: SS4                TOP: Volume of a Prism               KEY: volume | right rectangular prism
16. ANS: C                  PTS: 1                   DIF: Average           OBJ: Section 7.2  
NAT: SS4                TOP: Volume of a Prism  
KEY: height | problem | right triangular prism
17. ANS: A                  PTS: 1                   DIF: Easy               OBJ: Section 11.2  
NAT: SP2                TOP: Outcomes of Independent Events  
KEY: coin | independent events | probability | percent

18. ANS: C                   PTS: 1                   DIF: Easy                   OBJ: Section 11.2  
 NAT: SP2                   TOP: Outcomes of Independent Events  
 KEY: dice | independent events | probability | fraction
19. ANS: C                   PTS: 1                   DIF: Average                   OBJ: Section 11.2  
 NAT: SP2                   TOP: Outcomes of Independent Events                   KEY: coin | independent events | percents
20. ANS: D                   PTS: 1                   DIF: Average                   OBJ: Section 1.1  
 NAT: SP1                   TOP: Advantages and Disadvantages of Different Graphs  
 KEY: pictograph | advantages
21. ANS: C                   PTS: 1                   DIF: Average                   OBJ: Section 1.3  
 NAT: SP1                   TOP: Critiquing Data Presentation                   KEY: line graph
22. ANS: C                   PTS: 1                   DIF: Average                   OBJ: Section 2.1  
 NAT: N5                   TOP: Two-Term and Three-Term Ratios                   KEY: two-term ratio
23. ANS: C                   PTS: 1                   DIF: Average                   OBJ: Section 2.2  
 NAT: N5                   TOP: Rates                   KEY: rate | unit price
24. ANS: A                   PTS: 1                   DIF: Average                   OBJ: Section 3.2  
 NAT: M1                   TOP: Exploring the Pythagorean Relationship  
 KEY: Pythagorean relationship | Pythagorean triple
25. ANS: D                   PTS: 1                   DIF: Average                   OBJ: Section 3.2  
 NAT: M1                   TOP: Exploring the Pythagorean Relationship  
 KEY: Pythagorean relationship | Pythagorean triple
26. ANS: D                   PTS: 1                   DIF: Difficult                   OBJ: Section 3.2  
 NAT: M1                   TOP: Exploring the Pythagorean Relationship  
 KEY: Pythagorean relationship | Pythagorean triple
27. ANS: C                   PTS: 1                   DIF: Average                   OBJ: Section 3.3  
 NAT: N2                   TOP: Estimating Square Roots  
 KEY: number line | square root | benchmark
28. ANS: C                   PTS: 1                   DIF: Easy                   OBJ: Section 4.2  
 NAT: N3                   TOP: Fractions, Decimals, and Percents                   KEY: fraction to decimal
29. ANS: A                   PTS: 1                   DIF: Average                   OBJ: Section 4.2  
 NAT: N3                   TOP: Fractions, Decimals, and Percents  
 KEY: percent to fraction | fraction to percent
30. ANS: C                   PTS: 1                   DIF: Average                   OBJ: Section 4.3  
 NAT: N3                   TOP: Percent of a Number  
 KEY: fractional percent of a number | commission
31. ANS: A                   PTS: 1                   DIF: Average                   OBJ: Section 4.3  
 NAT: N3                   TOP: Percent of a Number                   KEY: percent of a number | GST
32. ANS: A                   PTS: 1                   DIF: Easy                   OBJ: Section 6.1  
 NAT: N6                   TOP: Multiplying a Fraction and a Whole Number  
 KEY: multiplication | fractions | lowest terms | whole number
33. ANS: A                   PTS: 1                   DIF: Easy                   OBJ: Section 6.3  
 NAT: N6                   TOP: Multiplying Proper Fractions  
 KEY: multiplication | proper fractions | lowest terms
34. ANS: D                   PTS: 1                   DIF: Easy                   OBJ: Section 6.2  
 NAT: N6                   TOP: Dividing a Fraction by a Whole Number  
 KEY: division | fractions
35. ANS: D                   PTS: 1                   DIF: Average                   OBJ: Section 6.6  
 NAT: N6                   TOP: Applying Fraction Operations  
 KEY: order of operations | fractions | multiplication | lowest terms

36. ANS: C                   PTS: 1                   DIF: Average           OBJ: Section 7.2  
 NAT: SS4                   TOP: Volume of a Prism           KEY: right rectangular prism | dimensions
37. ANS: B                   PTS: 1                   DIF: Average           OBJ: Section 8.1  
 NAT: N7                   TOP: Exploring Integer Multiplication  
 KEY: modelling | multiplication | positive integer
38. ANS: D                   PTS: 1                   DIF: Average           OBJ: Section 8.1  
 NAT: N7                   TOP: Exploring Integer Multiplication  
 KEY: modelling | multiplication | positive integer
39. ANS: A                   PTS: 1                   DIF: Easy               OBJ: Section 8.2  
 NAT: N7                   TOP: Multiplying Integers           KEY: modelling | multiplication | integers
40. ANS: B                   PTS: 1                   DIF: Easy               OBJ: Section 8.3  
 NAT: N7                   TOP: Exploring Integer Division           KEY: modelling | integers | division
41. ANS: B                   PTS: 1                   DIF: Difficult           OBJ: Section 10.2  
 NAT: PR2                   TOP: Modelling and Solving Two-Step Equations:  $ax + b = c$   
 KEY: interpret model | two-step equations
42. ANS: A                   PTS: 1                   DIF: Average           OBJ: Section 10.2  
 NAT: PR2                   TOP: Modelling and Solving Two-Step Equations:  $ax + b = c$   
 KEY: interpret model | two-step equations
43. ANS: A                   PTS: 1                   DIF: Easy               OBJ: Section 10.2  
 NAT: PR2                   TOP: Modelling and Solving Two-Step Equations:  $ax + b = c$   
 KEY: two-step equations | solve an equation
44. ANS: A                   PTS: 1                   DIF: Average           OBJ: Section 11.2  
 NAT: SP2                   TOP: Outcomes of Independent Events  
 KEY: independent events | spinner | probability | fraction
45. ANS: B                   PTS: 1                   DIF: Average           OBJ: Section 11.1  
 NAT: SP2                   TOP: Determining Probabilities Using Tree Diagrams and Tables  
 KEY: independent events | spinner | probability | fraction

