Prince Edward Island

CANADA

Education and Early Childhood Development

Intermediate Mathematics Assessment

Sampler

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

1. Which of the following is closest to the value of $\sqrt{0.82}$?

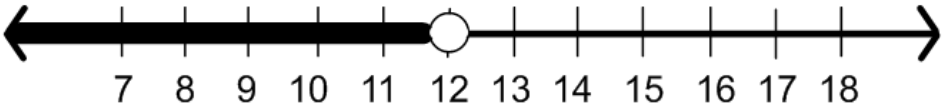
a. 0.09

b. 0.9

c. 9

d. 90

2. Write a word statement to represent the inequality shown.



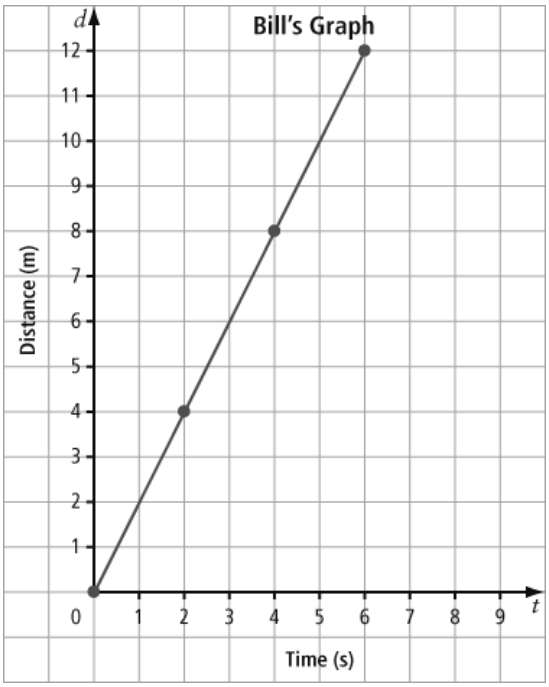
a. A number is greater than 12.

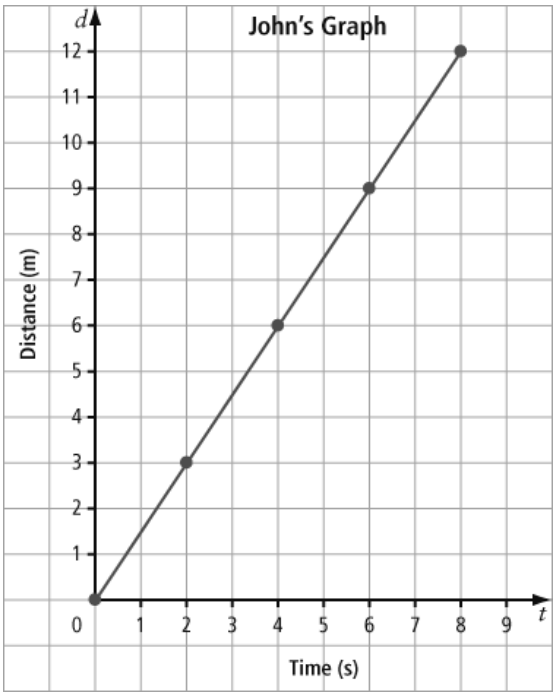
b. A number is greater than or equal to 12.

c. A number is less than 12.

d. A number is less than or equal to 12.

3. Using the graphs below, who walked at a faster rate?





a. Bill

b. John

c. The graphs do not show who was faster.

d. They walked at the same rate.

4. Simplify $(4z^2+2z+2)-(3z-2z^2-3)+(2+5z+3z^2)$**.**

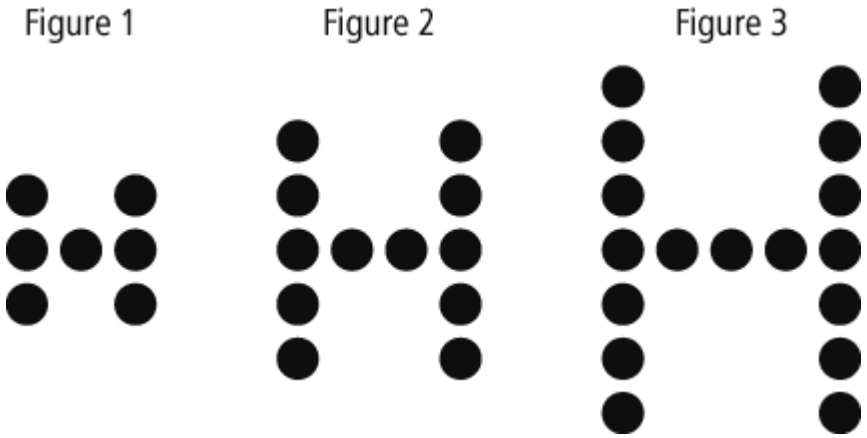
a. $3z^2+4z+1$

b. $6z^2+4z+5$

c. $9z^2+6z+7$

d. $9z^2+4z+7$

5. Using the figures below, which linear equation represents the relationship between figure number (*f*) and the number of dots (*n*) in the figure?



a. $f = 5n + 2$

b. $n = 5f + 2$

c. $n = 2f + 5$

d. $n = f + 5$

6. The weather report says there is a 25% chance of hail. The probability of not having any hail is

a. $\frac{1}{4}$

b. $\frac{1}{2}$

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

d. 1

7. A school principal surveys only the boys in one class to determine if she should make recess longer. This is an example of

a. bias

b. cultural insensitivity

c. inappropriate use of language

d. poor timing

8. Expand the expression $\left[\frac{3}{4}x\right](8x+4)$ using the distributive property.

a. $6x+3$

b. $\left[8\frac{3}{4}\right]x+4\frac{3}{4}$

c. $6x^2+3x$

d. $\left[8\frac{3}{4}\right]x^2+\left[4\frac{3}{4}\right]x$

9. What is the value of $\frac{(-5)^6}{(-5)^3}$?

a. –5

b. –25

c. –125

d. –625

10. What is another way of expressing 7^3 ?

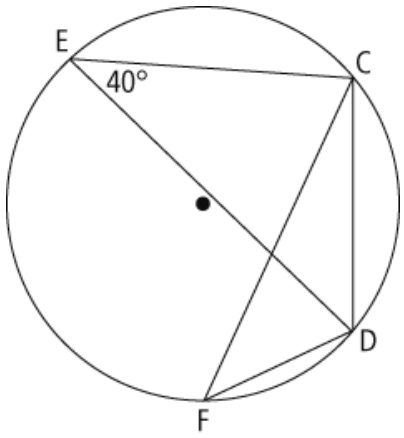
a. 3^7

b. 7×3

c. $7 \times 7 \times 7$

d. $3 \times 3 \times 3 \times 3 \times 3 \times 3 \times 3$

11. What is the measure of ∠CFD?



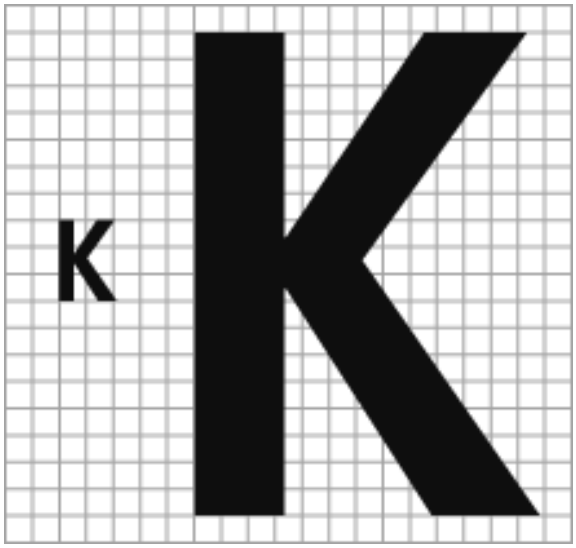
a. 20°

b. 40°

c. 50°

d. 80°

12. Compare the letter on the right to the letter on the left. The letter on the right



a. has a scale factor equal to 1

b. has a scale factor greater than 1

c. has a scale factor less than 1

d. has no scale factor

13. In which situation might privacy be an influencing factor?

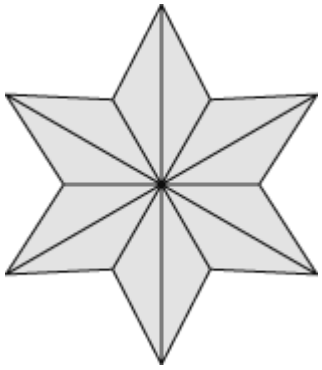
a. Students in a class are asked, “Do you like your parents?”

b. Every household in the city is mailed a survey asking, “Do you think it is important to maintain the city’s parks?”

c. After a winter storm, a travel agency sends out a survey asking, “Would you like to take a holiday in Mexico?”

d. A teacher asks her class to complete a survey and print their names on the top of the survey.

14. The design shown is an example of rotation symmetry. What is the order of rotation?



a. 1

b. 6

c. 8

d. 12

15. In professional baseball, the first base is a square with an area of 1444 cm^2. What is the length of one side of the base?

a. 722 cm

b. 361 cm

c. 38 cm

d. 12 cm

16. Evaluate $\frac{4}{9}+\frac{1}{6}\times\frac{2}{3}$

a. $\frac{5}{9}$

b. $\frac{11}{18}$

c. $\frac{7}{9}$

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

17. Solve $2.1\left[\frac{6k}{3} - 4.7\right] = 8.19$

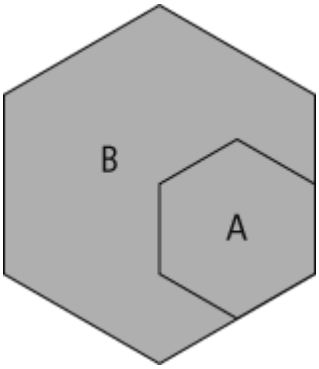
a. $k = 4.3$

b. $k = 8.19$

c. $k = 9.87$

d. $k = 18.06$

18. Compare hexagon A to hexagon B. Hexagon A has



a. angles that are smaller than the angles in hexagon B

b. angles that are proportional to the angles in hexagon B

c. angles that are larger than the angles in hexagon B

d. angles that are equal to the angles in hexagon B

19. Julia had $\frac{5}{6}$ of a pizza left over from a party. She gave Brooke $\frac{2}{5}$ of the leftover pizza. How much of the original pizza did Julia give to Brooke?

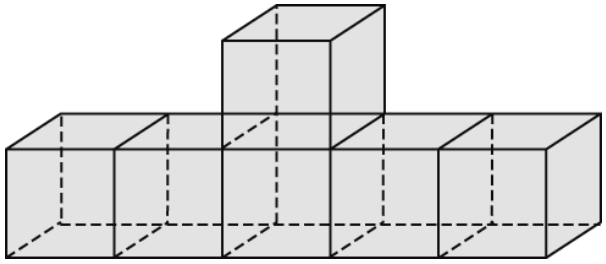
a. $\frac{7}{30}$

b. $\frac{1}{3}$

c. $\frac{7}{11}$

d. $\frac{2}{3}$

20. Each cube in the object has sides measuring 2.5 cm. What is the total surface area of the object?



a. 6.25 cm^2

b. 31.25 cm^2

c. 162.5 cm^2

d. 187.5 cm^2

21. When the following model is simplified, it produces the expression

a. $3x^2 + 5x + 2$

b. $2x^2 + 2x - 2$

c. $-x^2 - 3x - 4$

d. $-3x^2 - 5x - 2$

Solutions

MULTIPLE CHOICE

1. ANS: B PTS: 1 DIF: Easy OBJ: Section 2.4
   NAT: N6 TOP: Determining Square Roots of Rational Numbers
   KEY: rational numbers | square root
2. ANS: C PTS: 1 DIF: Average OBJ: Section 9.1
   NAT: PR4 TOP: Representing Inequalities
   KEY: number line | less than | graphic to verbal
3. ANS: A PTS: 1 DIF: Difficult OBJ: Section 6.2
   NAT: PR2 TOP: Interpreting Graphs KEY: interpreting graphs
4. ANS: D PTS: 1 DIF: Difficult OBJ: Section 5.3
   NAT: PR6 TOP: Adding and Subtracting Polynomials
   KEY: polynomial | simplify | subtraction
5. ANS: B PTS: 1 DIF: Difficult OBJ: Section 6.1
   NAT: PR1 TOP: Representing Patterns
   KEY: describe patterns | equation from table of values
6. ANS: C PTS: 1 DIF: Average OBJ: Section 11.3
   NAT: SP4 TOP: Probability in Society KEY: weather | probability
7. ANS: A PTS: 1 DIF: Average OBJ: Section 11.1
   NAT: SP1 TOP: Factors Affecting Data Collection KEY: bias
8. ANS: C PTS: 1 DIF: Difficult OBJ: Section 7.2
   NAT: PR7 TOP: Multiplying Polynomials by Monomials
   KEY: multiplying a binomial by a monomial | distributive property | expand
9. ANS: C PTS: 1 DIF: Average OBJ: Section 3.2
   NAT: N2 TOP: Exponent Laws
   KEY: quotient of powers | negative base | exponent laws
10. ANS: C PTS: 1 DIF: Average OBJ: Section 3.1
    NAT: N1 TOP: Using Exponents to Describe Numbers
    KEY: repeated multiplication | exponential form
11. ANS: B PTS: 1 DIF: Easy OBJ: Section 10.1
    NAT: SS1 TOP: Exploring Angles in a Circle KEY: inscribed angle
12. ANS: B PTS: 1 DIF: Average OBJ: Section 4.1
    NAT: SS4 TOP: Enlargements and Reductions KEY: scale factor | enlargement
13. ANS: D PTS: 1 DIF: Average OBJ: Section 11.1
    NAT: SP2 TOP: Factors Affecting Data Collection KEY: ethics
14. ANS: B PTS: 1 DIF: Average OBJ: Section 1.2
    NAT: SS5 TOP: Rotation Symmetry and Transformations
    KEY: rotation symmetry | order of rotation
15. ANS: C PTS: 1 DIF: Average OBJ: Section 2.4
    NAT: N5 TOP: Determining Square Roots of Rational Numbers
    KEY: rational numbers | square root | perfect square | area
16. ANS: A PTS: 1 DIF: Difficult OBJ: Section 2.3
    NAT: N3 | N4 TOP: Problem Solving With Rational Numbers in Fraction Form
    KEY: rational numbers | fraction operations | order of operations | add | multiply
17. ANS: A PTS: 1 DIF: Average OBJ: Section 8.3
    NAT: PR3 TOP: Solving Equations: $a(x + b) = c$

KEY: multi-step equation | division | addition | multiplication | grouping symbol

18. ANS: D PTS: 1 DIF: Average OBJ: Section 4.4
NAT: SS3 TOP: Similar Polygons KEY: similar polygons

19. ANS: B PTS: 1 DIF: Average OBJ: Section 2.3
NAT: N3 TOP: Problem Solving With Rational Numbers in Fraction Form
KEY: rational numbers | fraction operations | problem solving

20. ANS: C PTS: 1 DIF: Average OBJ: Section 1.3
NAT: SS2 TOP: Surface Area KEY: surface area | composite object

21. ANS: B PTS: 1 DIF: Average OBJ: Section 5.2
NAT: PR5 TOP: Equivalent Expressions KEY: expression | model | simplify