**Test #5 Review 3 Polynomials & Powers**

 1. Evaluate:  \_\_\_\_\_\_\_\_\_

 2. Which answers are negative?

i)  ii)  iii)  \_\_\_\_\_\_\_\_\_

 3. Write one hundred million as a power of 10. \_\_\_\_\_\_\_\_\_

 4. Evaluate:  \_\_\_\_\_\_\_\_\_

 5. Evaluate:  \_\_\_\_\_\_\_\_\_

 6. Which expressions have a value of 0? \_\_\_\_\_\_\_\_\_

i) 

ii) 

iii) 

iv) 

 7. Write the product of  as a single power. \_\_\_\_\_\_\_\_\_

 8. Express  as a single power. \_\_\_\_\_\_\_\_\_

 9. Evaluate:  \_\_\_\_\_\_\_\_\_

 10. Write  as a product of powers. \_\_\_\_\_\_\_\_\_

 11. Which expressions have negative values? \_\_\_\_\_\_\_\_\_

i)  ii)  iii)  iv)  \_\_\_\_\_\_\_\_\_

 12. Add the polynomials. Visualize algebra tiles if it helps.

 \_\_\_\_\_\_\_\_\_

 13. The perimeter of this isosceles triangle is represented by the polynomial .

Write a simplified polynomial for the length of the unknown side.

 \_\_\_\_\_\_\_\_\_

 14. Determine the area of this rectangle.

\_\_\_\_\_\_\_\_\_

 15. Divide:  \_\_\_\_\_\_\_\_\_ 16. Divide:  \_\_\_\_\_\_\_\_\_

 17. Simplify, then evaluate.

 \_\_\_\_\_\_\_\_\_

 18. a) Write the perimeter of this trapezoid as a polynomial in simplest form.

b) Determine the perimeter of the trapezoid when *x* = 5.

 Show your work.

  \_\_\_\_\_\_\_\_\_

 19. The polynomial  represents the amount of ink, in millilitres, used to print *p* posters and *f* flyers in colour. The polynomial  represents the amount of ink, in millilitres, used to print *p* posters and *f* flyers in black-and-white.

a) Write a polynomial for the difference in the amount of ink needed to print the two types of posters and flyers.

b) How much ink is saved if someone prints 210 posters and 180 flyers in black-and-white instead of colour?

 20. The perimeter of the regular hexagon below is **.

a) Determine the length of one side.

b) Determine the perimeter of one small triangle.

 



 21. a) Determine a polynomial for the perimeter of the shape below.

b) Determine a polynomial for the area of the shape below.

c) Determine the perimeter and area when *x* = 5 cm

**Test #5 Review 3 Poly & Powers**

**Answer Section**

**MULTIPLE CHOICE**

 1. ANS: A

 2. ANS: B

 3. ANS: B

 4. ANS: D

 5. ANS: A

 6. ANS: D

 7. ANS: A

 8. ANS: B

 9. ANS: A

 10. ANS: B

 11. ANS: A

 12. ANS: D

 13. ANS: B

 14. ANS: D

 15. ANS: A

 16. ANS: D

**SHORT ANSWER**

 17. ANS:

 = 

**PROBLEM**

 18. ANS:

a) 

b) Substitute *x* = 5.

 

 The perimeter of the trapezoid is 126 units.

 19. ANS:

a) 

b) Substitute *p* = 210 and *f* = 180 into .

 

 Printing 210 posters and 180 flyers in black-and-white instead of colour saves 10 695 mL of ink.

 20. ANS:

a) **

 The length of one side is **.

b) **

 The perimeter of one small triangle is *.*

 21. ANS:

a) Perimeter 

b) Area 

c) Perimeter:

 Substitute *x* = 5 into .

 

 The perimeter of the shape is 180 cm.

 Area:

 Substitute *x* = 5 into .

 

 The area of the shape is 1400 cm2.