Name:				Date:			
Kobrin/Losquadro				Math 8			
		Mixed Final Review S)				
1)	Which of the following exp $(3x^2y^4)(4xy^2)$ in simplest for A $12x^3y^8$ B $12x^2y^8$	oressions represents orm? C 12x ² y ⁶ D 12x ³ y ⁶	5)	In the accompanying dia and $\overrightarrow{BE} \perp \overrightarrow{BF}$ at B.	agram, D	, BD ⊥ ABC at B	
2)	If the perimeter of a rectan the length is $4x - 5$, what i A $x - 9$ B $6x + 3$	ngle is 10x + 8 and s the width? C x + 9 D 6x - 3		A E If m∠DBF is the complet and m∠FBC, what is m∠ A 110°	3 ment t .EBD? C	E to both m∠EBD	
3)	What is the sum of $4x^3 + 6x^3 + 3x^2 - 5x - 5$? A $7x^3 + 3x^2 - 5x - 5$? B $7x^6 + 9x^4 - 3x^2 - 8$ C $7x^3 + 3x^2 - 3x - 8$ D $7x^3 + 9x^2 - 3x - 8$	5x ² + 2x - 3 and	6)	 B 90° When 5x + 4y is subtraction is the difference? A 8y B -8y 	D ted fro C D	70° om 5 <i>x</i> – 4 <i>y</i> , what 10x 0	
4)	If the perimeter of a rectant the length is 5x - 2, what i A 3x + 5 B 3x - 5	ngle is 16x + 6 and s the width? C 11x - 8 D 11x + 8	7)	Which expression is equ -3x(x - 4) - 2x(x + 3)? A $-x^2 - 1$ B $-5x^2 + 6x$	uivaler C D	nt to $-5x^2 - 6x$ $-x^2 + 18x$	
			8)	Simplify the given express $7x^2 - 5t - 2(x^2 - 3t)$ A $9x^2 - 8t$ B $9x^2 - 2t$	ssion: C D	$5x^2 + 2t$ $5x^2 + t$	

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19) What are a pair of adjacent angles in the diagram below?



- **A** 2 and 3
- **B** 1 and 3

20) Expand and simplify the given polynomials:

(2x² + 3x - 4)(2x - 5) **A** $4x^{3} + 4x^{2} + 23x + 20$ **B** $4x^{3} + 16x^{2} - 7x + 20$ **C** $4x^{3} - 4x^{2} - 23x + 20$ **D** $4x^{3} - 4x^{2} - 7x + 20$

21) When $4x^2 + 7x - 5$ is subtracted from $9x^2 - 2x + 3$, the result is **A** $-5x^2 + 5x - 2$ **B** $5x^2 - 9x + 8$ **C** $-5x^2 + 9x - 8$ **D** $5x^2 + 5x - 2$

Questions 22 through 28 refer to the following:		28)	(4x + 3)(x - 1)
Expa 22)	nd and simplify the given polynomials: (y + 5)(y + 1)		
23)	(z + 4)(z + 7)	29)	Determine which number property is illustrated by the given statement: 5 + (-5) = 0 A Commutative Property of Addition
			B Identity Property for AdditionC Addition Property of EqualityD Property of Additive Inverse
24)	(z + 3)(z - 9)	30)	Two angles are complementary. If the measure of one angle is 15 less than twice the measure of the second angle, what is the number of degrees in the measure of the <i>larger</i> angle?
			Show your work.
25)	(3x + 4)(x + 7)		Answer:°
26)	(z + 7)(2z - 3)		
27)	(2 <i>x</i> - 5)(<i>x</i> - 3)		

31) In the accompanying diagram, \overrightarrow{AOB} is a straight line, m $\angle AOD = (3x - 8)^\circ$, and m $\angle BOD = x^\circ$.



Find the value of *x*.

Show your work.

Answer: _____

32) A plane travels at a rate represented by (x + 100) miles per hour. Represent the distance it can travel in (2x + 3) hours.

33) The price of a coat is represented by (2x + 5) dollars. Represent the amount a man paid for (3x - 1) of these coats.

34) The dimensions of a rectangle are represented by 7c - 8d and 3c + 5d. Represent the area of the rectangle.

35) The dimensions of a rectangle are represented by 11x - 8 and 3x + 5. Represent the area of the rectangle.

36) In the accompanying diagram, line \overrightarrow{PQ} is parallel to line \overrightarrow{RS} , line \overrightarrow{TU} is a transversal, $m \angle PAT = (3x + 12)^{\circ}$, and $m \angle SBT = (2x + 13)^{\circ}$. Use what you know about geometric angle relationships to find the value of x. Show all your work and explain how you got your answer.



37) Given the figure below where $a \parallel b$.



Find the m \perp 1 if m \perp 5 = 127°.

- 38) Which of the following is an irrational number?
- A π B $\frac{22}{7}$ C $3\frac{1}{7}$ D 3.14 39) Draw a number line and graph and label the following points: $\frac{8}{5}$, 1, -2.5, π

40) The length of a rectangle is 2x - 5 and its width is x + 7. Express the area of the rectangle.

3) D 1) D 2) C 4) A 5) C 6) B 7) B 8) D 9) B 10) C 12) B 13) C 14) D 15) A 11) A 16) C 17) A 18) D 19) A 20) C

21) B

22) $y^2 + 6y + 5$

- **2**3) $z^2 + 11z + 28$
- **2**4) $z^2 6z 27$
- **25**) $3x^2 + 25x + 28$
- **2**6) $2z^2 + 11z 21$
- **2**7) $2x^2 11x + 15$
- **2**8) $4x^2 x 3$
- 29) D

30) 55° WORK SHOWN: x = smaller angle, 2x - 15 = larger angle; x + 2x - 15 = 90, 3x = 105, $x = 35^{\circ}$, $2(35) - 15 = 55^{\circ}$

31) 47

WORK SHOWN: $(3x - 8) + x = 180, 4x - 8 = 180, 4x = 180 + 8, x = 188 \div 4 = 47$

- **3**2) $2x^2 + 203x + 300$
- **3**3) $6x^2 + 13x 5$
- **3**4) $21c^2 + 11cd 40d^2$
- **3**5) $33x^2 + 31x 40$
- **3**6) 31

WORK SHOWN: $\angle PAT \cong \angle QAU$ because they are vertical angles, so $\angle QAU = (3x + 12)^\circ$. $\angle QAU$ and $\angle SBT$ are supplementary angles, so 3x + 12 + 2x + 13 = 180, 5x + 25 = 180, 5x = 155, x = 31.

- **3**7) 53°
- 38) A
- **3**9) $\begin{array}{c} -2.5 \\ -6 & -5 & -4 & -3 & -2 & -1 \\ \end{array} \begin{array}{c} 8 \\ -6 & -5 & -4 & -3 & -2 & -1 \\ \end{array} \begin{array}{c} 8 \\ -6 & -5 & -4 & -3 & -2 & -1 \\ \end{array} \begin{array}{c} 8 \\ -6 & -5 & -4 & -3 & -2 & -1 \\ \end{array}$
- **4**0) $2x^2 + 9x 35$