Dividing Monomials
Codebreaker

A	B	C	D	E	F	G	H	I	J	K	L	M
$6x^{17}y^{12}$	$2y^5$	x^4	$2x^3y^4$	x^{-2}	y^5	y^{-8}	x^5y^{-4}	x^2	$2x^3y$	xy^2	y^8	xy

N	O	P	Q	R	S	T	U	V	W	X	Y	Z
$4y^{-3}$	$\dfrac{x^4}{y^2}$	x^2y	$\dfrac{1}{x^4}$	$\dfrac{-x^8}{2y^2}$	$2x^2y$	$5xy^2$	$-x^{-2}$	x^8	$\dfrac{1}{x^5}$	$\dfrac{y^2}{x^4}$	$4y^3$	x^7y^7

Divide each monomial question below. Match your answer to a letter in the table above to complete the code in the five boxes at the bottom.

1. $\dfrac{y^8}{y^3}$

2. $\dfrac{y^{17}}{y^9}$

3. $\dfrac{x^4y^2}{x^2y}$

4. $\dfrac{x^7y^3}{x^3y^3}$

5. $\dfrac{x^{11}y^9}{x^4y^2}$

6. $\dfrac{8x^4y^6}{4xy^5}$

7. $\dfrac{42x^{19}y^{17}}{7x^2y^5}$

8. $\dfrac{x^4}{x^9}$

9. $\dfrac{x^{15}}{x^{17}}$

10. $\dfrac{5(xy)(xy^3)}{xy^2}$

11. $\dfrac{x^7y^4}{x^{11}y^2}$

12. $\dfrac{x^9y^8}{x^4y^{12}}$

13. $\dfrac{8x^{11}y^6}{2x^{11}y^9}$

14. $\dfrac{-4(x^2y^3)(x^2)^3}{8y^5}$

15. $\dfrac{10(xy)^2(xy^3)}{5y}$

1 2 3 4	5 6 7	8 9 10 11	12 13 14	15

SOLUTION

Dividing Monomials
Codebreaker

A	B	C	D	E	F	G	H	I	J	K	L	M
$6x^{17}y^{12}$	$2y^5$	x^4	$2x^3y^4$	x^{-2}	y^5	y^{-8}	x^5y^{-4}	x^2	$2x^3y$	xy^2	y^8	xy

N	O	P	Q	R	S	T	U	V	W	X	Y	Z
$4y^{-3}$	$\dfrac{x^4}{y^2}$	x^2y	$\dfrac{1}{x^4}$	$\dfrac{-x^8}{2y^2}$	$2x^2y$	$5xy^2$	$-x^{-2}$	x^8	$\dfrac{1}{x^5}$	$\dfrac{y^2}{x^4}$	$4y^3$	x^7y^7

Divide each monomial question below. Match your answer to a letter in the table above to complete the code in the five boxes at the bottom.

1. $\dfrac{y^8}{y^3}$

y^5

2. $\dfrac{y^{17}}{y^9}$

y^8

3. $\dfrac{x^4y^2}{x^2y}$

x^2y

4. $\dfrac{x^7y^3}{x^3y^3}$

x^4

5. $\dfrac{x^{11}y^9}{x^4y^2}$

x^7y^7

6. $\dfrac{8x^4y^6}{4xy^5}$

$2x^3y$

7. $\dfrac{42x^{19}y^{17}}{7x^2y^5}$

$6x^{17}y^{12}$

8. $\dfrac{x^4}{x^9}$

$\dfrac{1}{x^5}$

9. $\dfrac{x^{15}}{x^{17}}$

x^{-2}

10. $\dfrac{5(xy)(xy^3)}{xy^2}$

$5xy^2$

11. $\dfrac{x^7y^4}{x^{11}y^2}$

$\dfrac{y^2}{x^4}$

12. $\dfrac{x^9y^8}{x^4y^{12}}$

x^5y^{-4}

13. $\dfrac{8x^{11}y^6}{2x^{11}y^9}$

$4y^{-3}$

14. $\dfrac{-4(x^2y^3)(x^2)^3}{8y^5}$

$\dfrac{-x^8}{2y^2}$

15. $\dfrac{10(xy)^2(xy^3)}{5y}$

$2x^3y^4$

F - L - P	C - Z - J	A - W - E	T - X - H	N - R - D

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Multiplying Decimals
CODE BREAKER GAME

Multiplying Decimals Code Breaker

A	B	C	D	E	F	G	H	I	J	K	L	M
2.362	0.547	15.8	1.033	0.476	5.88	6.103	1.08	3.442	0.707	0.12	0.63	0.018

N	O	P	Q	R	S	T	U	V	W	X	Y	Z
1.23	0.0444	0.1776	4.32	8.15	3.146	14.4	5.4	0.0035	46	0.088	68.73	

Work out the decimal multiplications, link your answers to the table above to complete the code in the four boxes at the bottom:

1. 9.2 × 5 → 46
2. 3.6 × 4 → 14.4
3. 7.9 × 2 → 15.8
4. 0.4 × 0.3 → 0.12
5. 0.7 × 0.9 → 0.63
6. 0.03 × 0.6 → 0.018
7. 0.05 × 0.07 → 0.0035
8. 3.6 × 0.3 → 1.08
9. 7.4 × 0.006 → 0.0444
10. 8.7 × 7.9 → 68.73
11. 0.14 × 3.4 → 0.476
12. 0.74 × 0.24 → 0.1776

X – T – C   K – L – M   W – H – O   Z – E – P

Ten Tors Math

Multiplying Decimals

GCF and LCM **Freebie**
CODE BREAKER GAME

GCF and LCM Code Breaker

A	B	C	D	E	F	G	H	I	J	K	L	M
5	7	25	12	11	24	36	45	60	14	16	29	33

N	O	P	Q	R	S	T	U	V	W	X	Y	Z
55	150	84	15	9	10	30	66	6	13	18	8	

Find the GCF or LCM for these questions, link them to the table above to complete the code in the four boxes at the bottom:

1. GCF of 18 and 30 → 6
2. GCF of 25 and 60 → 5
3. GCF of 36 and 90 → 18
4. LCM of 8 and 12 → 24
5. LCM of 10 and 60 → 60
6. GCF of 16, 32 and 40 → 8
7. LCM of 21 and 28 → 84
8. LCM of 2, 6 and 11 → 66
9. GCF of 36, 60 and 84 → 12
10. GCF of 75 and 350 → 25
11. LCM of 50 and 75 → 150
12. GCF of 39 and 52 → 13

V – A – X   F – I – Z   P – U – D   C – O – W

Ten Tors Math

GCF LCM

PRIME FACTOR FORM
CODE BREAKER GAME

Prime Number Code Breaker

Write the numbers below as a product of primes, link them to the table above to complete the code in the four boxes at the bottom:

1. 140 → $2^2 \times 5 \times 7$
2. 168 → $2^3 \times 3 \times 7$
3. 550 → $2 \times 5^2 \times 11$
4. 210 → $2 \times 3 \times 5 \times 7$
5. 336 → $2^4 \times 3 \times 7$
6. 2625 → $3 \times 5^3 \times 7$
7. 306 → $2 \times 3^2 \times 17$
8. 735 → $3 \times 5 \times 7^2$
9. 1144 → $2^3 \times 11 \times 13$
10. 396 → $2^2 \times 3^2 \times 11$
11. 6006 → $2 \times 3 \times 7 \times 11 \times 13$
12. 484 → $2^2 \times 11^2$

Z – O – M   B – A – G   L – I – D   X – E – C

Ten Tors Math

Prime Factors

Multiplying Integers
CODE BREAKER GAME

Multiplying Integers Code Breaker

A	B	C	D	E	F	G	H	I	J	K	L	M
198	192	170	292	258	350	160	144	244	127	176	204	

N	O	P	Q	R	S	T	U	V	W	X	Y	Z
498	138	266	145	364	286	272	440	62	254	81	118	606

Simplify the exponents above, link them to the answers in the table above to complete the code in the four boxes at the bottom:

1. 3 × 27 → 81
2. 6 × 43 → 258
3. 2 × 89 → 178
4. 5 × 34 → 170
5. 3 × 66 → 198
6. 4 × 73 → 292
7. 2 × 96 → 192
8. 7 × 52 → 364
9. 6 × 23 → 138
10. 6 × 83 → 498
11. 8 × 18 → 144
12. 7 × 38 → 266

X – E – L   C – A – D   B – R – O – N   I – P

Ten Tors Math

Multiplying Integers

Add & Subtract Decimals
CODE BREAKER GAME

Adding & Subtracting Decimals Code Breaker

A	B	C	D	E	F	G	H	I	J	K	L	M
14.24	2.69	17.33	3.1	13.54	19.34	0.76	8.02	8.606	19.34	14.57	3.708	

N	O	P	Q	R	S	T	U	V	W	X	Y	Z
14.21	2.708	1.79	4.11	9.371	0.87	2.65	18.11	-3.6	246	78	12.66	19.172

Work out the decimal sums below, link your answers to the table above to complete the code in the four boxes at the bottom:

1. 10.63 + 6.7 → 17.33
2. 3.271 + 6.1 → 9.371
3. 0.668 + 3.04 → 3.708
4. 2.472 + 16.7 → 19.172
5. 14.52 − 6.5 → 8.02
6. 46.5 − 6.21 → 40.29
7. 6.73 − 0.124 → 6.606
8. 4.83 + 9.74 → 14.57
9. 3.33 − 2.46 → 0.87
10. 2.75 + 11.46 → 14.21
11. 6.72 − 4.93 → 1.79
12. 4.8 − 0.69 → 4.11

C – R – M   Z – I – X   J – L – S   N – P – Q

Ten Tors Math

Add Subtract Decimals

Percentage of an Amount

Percentage of a Quantity Codebreaker

A	B	C	D	E	F	G	H	I	J	K	L	M
66	87	3.5	88	40	148	175	30	2.8	360	56	12	189

N	O	P	Q	R	S	T	U	V	W	X	Y	Z
190.4	190	217	13	175	246	78	12.66	60	86	22	11	

Answer each question, simplify where possible. Where relevant, leave your answer as an improper fraction. Link your answer to the table above to complete the code in the four boxes at the bottom:

1. 50% of 24 → 12
2. 25% of 120 → 30
3. 80% of 450 → 360
4. 35% of 620 → 217
5. 15 % of 440 → 66
6. 27% of 700 → 189
7. 11% of 800 → 88
8. 5% of 260 → 13
9. 80% of 70 → 56
10. 65% of 120 → 78
11. 2% of 140 → 2.8
12. 56% of 340 → 190.4
13. 2.5% of 7000 → 175
14. 33% of 600 → 198
15. 40% of 150 → 60

X – H – J   P – A – M   D – Q – K   T – I – N   G – U – V

Codebreaker Game   Ten Tors Math

Percentage of an Amount

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Multiplying Exponents
CODE BREAKER GAME

Multiplying Exponents

Quadratic Formula
CODE BREAKER GAME

Quadratic Formula

Scientific Notation
CODE BREAKER GAME

Scientific Notation

Pythagorean
CODE BREAKER GAME

Pythagorean Theorem

Simplifying Radicals
CODE BREAKER GAME

Simplifying Radicals

Rational Exponents
CODE BREAKER GAME

Rational Exponents

Some more resources you may like! (click the link)

Doubling and Halving
Bingo! Game
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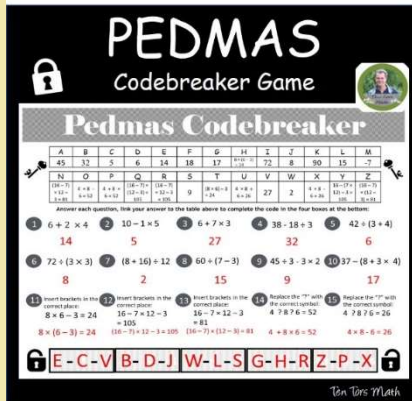
Fractions – the four operations

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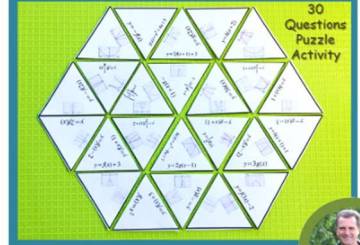### Volume & Surface Area

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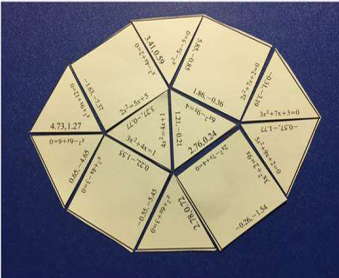## Quadratic Graph Transformations

Graph Transformations Puzzle Activity

30 Questions Puzzle Activity
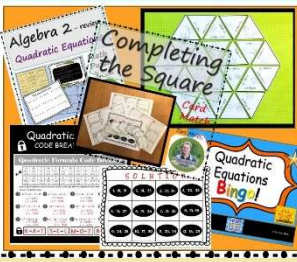
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