

Number patterns — Growing by a step

Name: _____

Date: _____



Find the missing number in each pattern.

1 1, 12, 23, 34, 45

2 9, 19, 29, ____, 49

3 6, ____, 26, 36, 46

4 2, 12, 22, ____, 42

5 5, 14, ____, 32, 41

6 7, 12, ____, 22, 27

7 4, 8, ____, 16, 20

8 1, 7, 13, ____, 25

9 2, 6, ____, 14, 18

10 6, 9, ____, 15, 18

11 7, 11, 15, ____, 23

12 5, 10, 15, ____, 25



Number patterns — Shrinking by a step

Name: _____

Date: _____



Find the missing number in each pattern.

1 25, 20, 15, 10, 5

2 22, 18, 14, ____, 6

3 27, ____, 15, 9, 3

4 29, ____, 19, 14, 9

5 29, 23, ____, 11, 5

6 32, ____, 18, 11, 4

7 12, ____, 8, 6, 4

8 52, ____, 30, 19, 8

9 17, ____, 9, 5, 1

10 46, ____, 26, 16, 6

11 31, 24, ____, 10, 3

12 27, 22, ____, 12, 7



Number patterns — Growing by a factor

Name: _____

Date: _____



Find the missing number in each pattern.

1 4, 8, 16, 32

2 2, 6, ____, 54

3 1, ____, 9, 27

4 3, 6, ____, 24

5 1, ____, 4, 8

6 1, 3, ____, 27

7 2, 4, ____, 16

8 4, ____, 36, 108

9 2, ____, 18, 54

10 4, 8, ____, 32

11 1, 2, ____, 8

12 4, 12, ____, 108



Exponents — Squares (n^2)

Name: _____

Date: _____



Find the value of each square.

1 $20^2 = \underline{400}$

2 $13^2 = \underline{\hspace{2cm}}$

3 $19^2 = \underline{\hspace{2cm}}$

4 $2^2 = \underline{\hspace{2cm}}$

5 $17^2 = \underline{\hspace{2cm}}$

6 $16^2 = \underline{\hspace{2cm}}$

7 $10^2 = \underline{\hspace{2cm}}$

8 $9^2 = \underline{\hspace{2cm}}$

9 $3^2 = \underline{\hspace{2cm}}$

10 $7^2 = \underline{\hspace{2cm}}$

11 $6^2 = \underline{\hspace{2cm}}$

12 $11^2 = \underline{\hspace{2cm}}$



Exponents — Cubes (n^3)

Name: _____

Date: _____



Find the value of each cube.

1 $2^3 = 8$ _____

2 $9^3 =$ _____

3 $12^3 =$ _____

4 $8^3 =$ _____

5 $3^3 =$ _____

6 $7^3 =$ _____

7 $10^3 =$ _____

8 $4^3 =$ _____

9 $11^3 =$ _____

10 $5^3 =$ _____

11 $6^3 =$ _____



Exponents — Powers (b^e)

Name: _____

Date: _____



Find the value of each power.

1 $2^2 = 4$ _____

2 $3^2 =$ _____

3 $4^2 =$ _____

4 $2^4 =$ _____

5 $6^3 =$ _____

6 $4^3 =$ _____

7 $6^2 =$ _____

8 $2^3 =$ _____

9 $3^3 =$ _____

10 $5^3 =$ _____

11 $4^4 =$ _____

12 $5^4 =$ _____



Power Pack · Patterns and powers — Answer key



Add a step

1. 1, [12], 23, 34, 45

2. 9, 19, 29, [39], 49

3. 6, [16], 26, 36, 46

4. 2, 12, 22, [32], 42

5. 5, 14, [23], 32, 41

6. 7, 12, [17], 22, 27

7. 4, 8, [12], 16, 20

8. 1, 7, 13, [19], 25

9. 2, 6, [10], 14, 18

10. 6, 9, [12], 15, 18

11. 7, 11, 15, [19], 23

12. 5, 10, 15, [20], 25

Subtract a step

1. 25, 20, 15, [10], 5

2. 22, 18, 14, [10], 6

3. 27, [21], 15, 9, 3

4. 29, [24], 19, 14, 9

5. 29, 23, [17], 11, 5

6. 32, [25], 18, 11, 4

7. 12, [10], 8, 6, 4

8. 52, [41], 30, 19, 8

9. 17, [13], 9, 5, 1

10. 46, [36], 26, 16, 6

11. 31, 24, [17], 10, 3

12. 27, 22, [17], 12, 7

Multiply by a factor

1. 4, [8], 16, 32

2. 2, 6, [18], 54

3. 1, [3], 9, 27

4. 3, 6, [12], 24

5. 1, [2], 4, 8

6. 1, 3, [9], 27

7. 2, 4, [8], 16

8. 4, [12], 36, 108

9. 2, [6], 18, 54

10. 4, 8, [16], 32

11. 1, 2, [4], 8

12. 4, 12, [36], 108

Squares

1. $20^2 = 400$

2. $13^2 = 169$

3. $19^2 = 361$

4. $2^2 = 4$

5. $17^2 = 289$

6. $16^2 = 256$

7. $10^2 = 100$

8. $9^2 = 81$

9. $3^2 = 9$

10. $7^2 = 49$

11. $6^2 = 36$

12. $11^2 = 121$

Cubes

1. $2^3 = 8$

2. $9^3 = 729$

3. $12^3 = 1728$

4. $8^3 = 512$

5. $3^3 = 27$

6. $7^3 = 343$

7. $10^3 = 1000$

8. $4^3 = 64$

9. $11^3 = 1331$

10. $5^3 = 125$

11. $6^3 = 216$

Powers

1. $2^2 = 4$

2. $3^2 = 9$

3. $4^2 = 16$

4. $2^4 = 16$

5. $6^3 = 216$

6. $4^3 = 64$

7. $6^2 = 36$

8. $2^3 = 8$

9. $3^3 = 27$

10. $5^3 = 125$

11. $4^4 = 256$

12. $5^4 = 625$