

Year 9 - Worksheet 4

PUZZLES

I am thinking of a number. If I treble it and subtract 3, the answer is 48. What is the number?

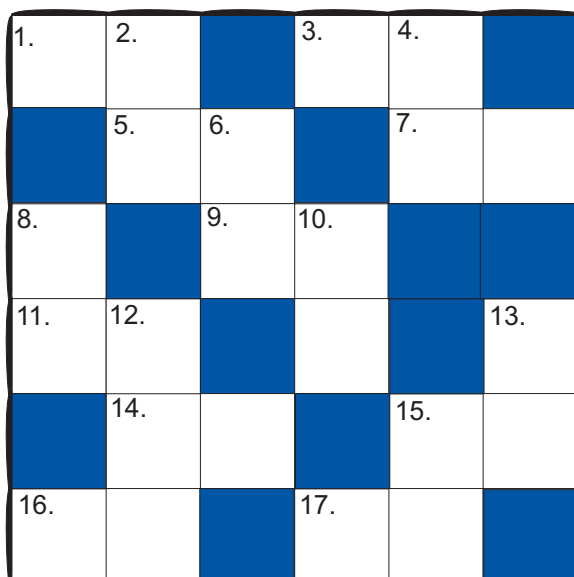


You have a 10 cm × 10 cm cube that is made from 1 cm × 1 cm cubes. If you painted the outside of the big cube blue, how many of the small 1 cm cubes would get painted?

EQUATION SOLVING

Solve the following equations:

- | | | | | | |
|----|-----------|-------|-----|------------|-------|
| 1. | $3x = 6$ | _____ | 6. | $5x = 95$ | _____ |
| 2. | $5x = 15$ | _____ | 7. | $6x = 126$ | _____ |
| 3. | $4x = 8$ | _____ | 8. | $11x = 11$ | _____ |
| 4. | $2x = 22$ | _____ | 9. | $5x = 0$ | _____ |
| 5. | $3x = 30$ | _____ | 10. | $2x = 132$ | _____ |



CROSS NUMBER

Across

1. $2x = 24$
3. $2(x - 3) = 16$
5. $2x - 1 = 81$
7. $x \div 10 = 4$
9. $(x - 1) \div 5 = 8$
11. $x \div 5 = 3$
14. $2x + 1 = 27$
15. $x \div 2 = 20$
16. $x \div 3 = 8$
17. $5x - 3 = 2x + 60$

Down

2. $x \div 3 = 8$
4. $2x - 3 = 25$
6. $2(x + 6) = 40$
8. $2x + 3 = x + 14$
10. $x - 3 = 7$
12. $(3x + 4) \div 2 = 773$
13. $2x + 3 = 23$
15. $(x - 1) \div 5 = 8$

Solve the following equations:

1. $\frac{x}{3} = 2$ _____

2. $\frac{x}{5} = 4$ _____

3. $\frac{x}{6} = 6$ _____

4. $\frac{x}{5} = 11$ _____

5. $\frac{x}{2} = 1$ _____

6. $\frac{x}{11} = 3$ _____

7. $\frac{x}{5} = 0$ _____

8. $\frac{x}{x} = 1$ _____

9. $\frac{x}{0} = 0$ _____

10. $\frac{x}{8} = \frac{1}{2}$ _____

QUICK QUESTIONS

1. $235 + 193 =$ _____

2. $121 - 96 =$ _____

3. $6 \times 5 - 11 \times 2 =$ _____

4. $4 + 4 \times 4 \times 0 =$ _____

5. Find the missing numbers:
17, 21, _____, 29, _____, 37

6. What is 10% of 450?

7. Convert 0.07 to a percentage.

8. What are the factors of 24.

9. List the prime numbers
between 5 and 15.

10. $\frac{3}{7} - \frac{1}{6}$ _____

PUZZLE

The stairway shown is made of cubes. How many cubes would be needed to make the stairway if the steps at the end were 9 cubes high?



EQUATION SOLVING

Solve the following equations

1. $x + 3 = 11$

2. $x - 3 = 7$

3. $x \div 3 = 5$

4. $7x = 2x - 15$

5. $27x = 15x + 72$

6. $2x - 1 = 7$

7. $3x - 5 = 19$

8. $6x - 18 = 2x + 10$

9. $5x - 7 = -22$

10. $7x + 3 = 3x - 13$

QUICK CALCULATIONS

Calculate these without a calculator.

1. $5 \times 27 \times 2$

= _____

2. $20 \times 42 \times 5$

= _____

3. $25 \times 9 \times 4$

= _____

4. $50 \times 17 \times 20$

= _____

5. $10 \times 33 \times 10$

= _____

Remember: $99 = 100 - 1$

$9 = 10 - 1$

6. 25×99

= _____

7. 19×9

= _____

8. $0.5 \times 5 \times 20$

= _____

9. 210×201

= _____

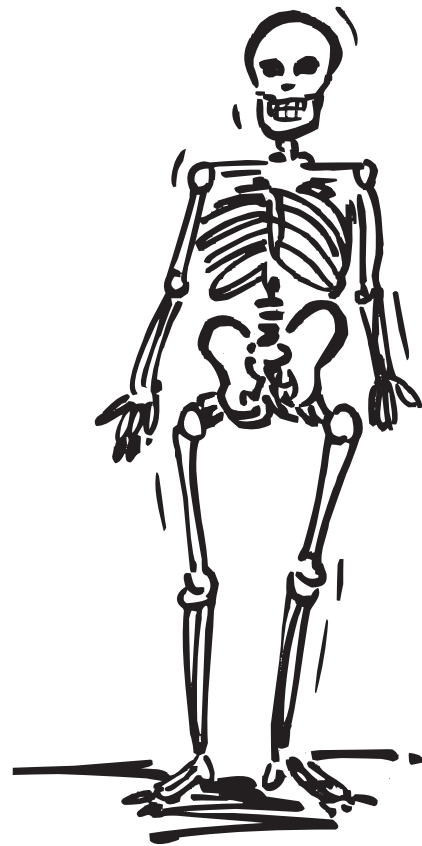
10. 80×101

= _____

HOW OLD ARE THE CELLS OF A BODY?

Solve the following equations. Find the answer in the column opposite and place the letter in the table below.

T	1. $2x = 16$
H	2. $x - 2 = 4$
E	3. $\frac{x}{5} = 3$
O	4. $9x + 2 = 7x - 12$
L	5. $7x - 1 = 6$
D	6. $\frac{x}{5} = -2$
S	7. $5x - 2 = 14 - 3x$
I	8. $2(x - 1) = 8$
V	9. $5x - 2 = 2x + 7$
N	10. $3x + 1 = -11$
Y	11. $3x - 1 = 11$
A	12. $4x + 3 = -7 - x$
R	13. $4x - 2 = x + 19$



8	6	15		-7	1	-10	15	2	8		5	2

2	15	3	15	-4		4	15	-2	7	2		-7	1	-10
