

Year 8 Class 14 questions

Q1

Expand and simplify $8m - (1 - 2m)$.

- $10m$
- $m + 10$
- $10m - 1$
- $10m - 3$

Q2

Expand and simplify $4m + 3n - (2m + n)$.

- $8m - 4n$
- $2m + 2n$
- $6m + 3n$
- $6mn - 2$

Q3

Expand and simplify $5 + 2(m - 3)$.

- $2m + 2$
- $2m - 1$
- $2m + 11$

Q4

Expand and simplify:

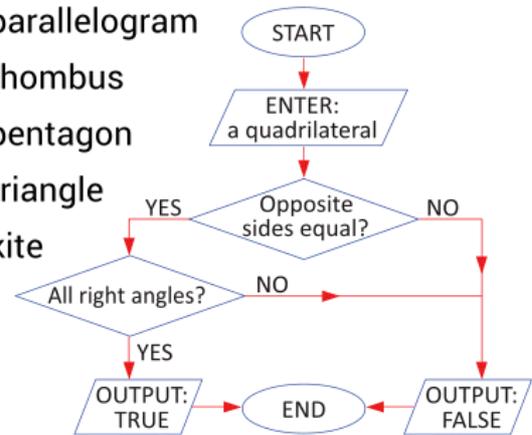
$$6x^2 + x(y - 2x) = 6x^2 + \square - \square x^2$$

$$= \square x^2 + \square$$

Q5

Choose the shapes which could be successfully *ENTERED*.

- parallelogram
- rhombus
- pentagon
- triangle
- kite



Which shapes would return a *YES* for the first question?

- trapezium
- rectangle
- rhombus
- square
- kite

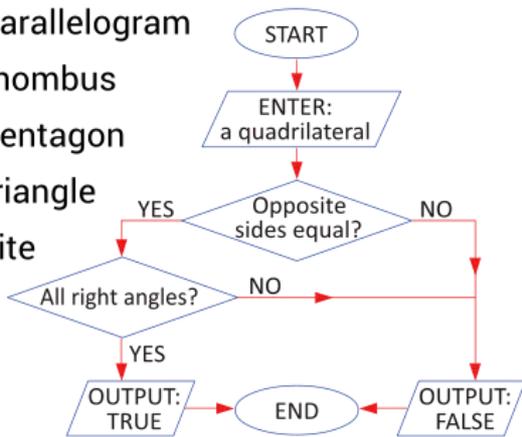
Choose the shapes which would return a *TRUE* output.

- trapezium
- rectangle
- rhombus
- square
- kite

Q6

Choose the shapes which could be successfully *ENTERED*.

- parallelogram
- rhombus
- pentagon
- triangle
- kite



Which shapes would return a *NO* for the first question?

- trapezium
- rectangle
- rhombus
- square
- kite

Choose the shapes which would return a *FALSE* output.

- trapezium
- rectangle
- rhombus
- square
- kite

Q7

If $v = u + gt$, calculate t when $v = 48$, $u = 39$, $g = 9$.

$t = \square$

Q8

Given that $A = \pi r^2$, find r (to 1 d.p.) when $A = 128$. (r is positive)

$r = \square$

Q9

Expand and simplify $7m - (4m - n)$.

- $3m - n$
- $m + 11$
- $3m + n$
- $3m - 2$

Q10

Expand and simplify $8(m - 3) + 3(2m + 4)$.

- $14m - 12$
- $10m - 16$
- $14m - 20$
- $14m + 36$

Q11

Expand and simplify $6(a + 2b) + a(3 + 2b)$.

- $2a^2 + 12b + 9$
- $9a - 2b + 12ab$
- $9a + 12b + 2ab$
- $12a^2 - 9b + 2$

Q12

Expand and simplify $m(m + n) - n(2m - n)$.

- $m^2 - n^2 - mn$
- $m^2 - mn + n^2$
- $m^2 + mn + n^2$

Q13

Expand and simplify:

$$4(3x + 1) - x(3x + 1) = \square x + 4 - \square x^2 - x$$

$$= \square x - \square x^2 + 4$$

Q14

Expand and simplify:

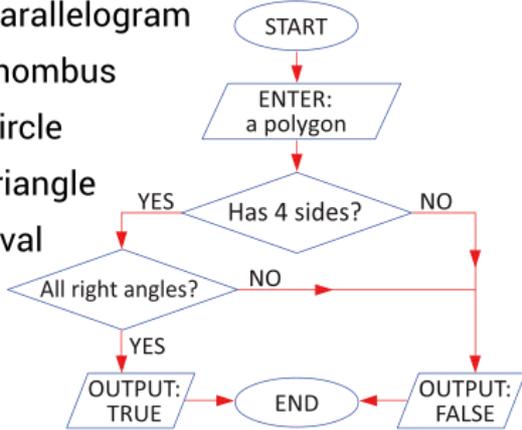
$$2a(a+b) - b(2a+b) = \square a^2 + \square ab - \square ab - b^2$$

$$= \square a^2 - b^2$$

Q15

Choose the shapes which could be successfully *ENTERED*.

- parallelogram
- rhombus
- circle
- triangle
- oval



Which shapes would return a *NO* for the first question?

- trapezium
- triangle
- rhombus
- pentagon
- hexagon

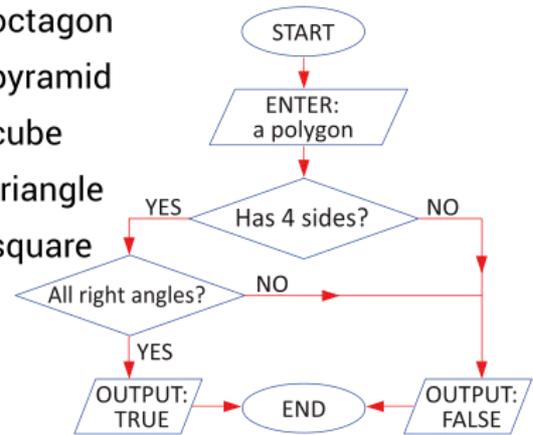
Choose the shapes which would return a *TRUE* output.

- trapezium
- rectangle
- rhombus
- square
- kite

Q16

Choose the shapes which could be successfully *ENTERED*.

- octagon
- pyramid
- cube
- triangle
- square



Which shapes would return a *YES* for the first question?

- trapezium
- hexagon
- rhombus
- pentagon
- kite

Choose the shapes which would return a *FALSE* output.

- trapezium
- rectangle
- rhombus
- hexagon
- kite

Q17

$E = \frac{1}{2}mv^2$. Calculate the positive value of v when $E = 90$, $m = 5$.

$v = \square$

Q18

Given $C = \frac{E}{R}$, calculate E when $C = 15$, $R = 3$.

$E = \square$

Q19

Given $C = \frac{E}{R}$, calculate E when $C = -5$, $R = 7$.

$E = \square$

Q20

Expand and simplify $10(4 + 4f) - 7(5f + 2)$.

- $26f$
- $26 - 5f$
- $5f + 26$
- $5f - 25$

Q21

Expand and simplify $4(3 - 2j) + 5(3j - 2)$.

- $7j + 2$
- $2j + 7j$
- $7j - 2j$
- $j - 7j$

Q22

Expand and simplify $x(3 - 2x) - (6x^2 + 4x)$.

- $-8x^2 - x$
- $-12x^2$
- $8x - 4x$
- $8x^2 + x$

Q23

Expand and simplify $2m(m + 5) - 5(2m + 5)$.

- $2m^2 - 25$
- $2m^2 - 10$
- $2m^2 + 25$

Q24

Expand and simplify:

$$2a(a + b) + b(2a - b) = \square a^2 + \square ab + \square ab - b^2$$

$$= \square a^2 + \square ab - b^2$$

Q25

Expand and simplify:

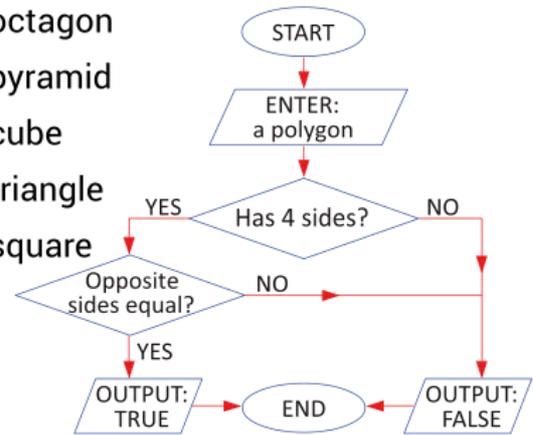
$$3x(3x + y) - y(3x + y) = \square x^2 + \square xy - \square xy - y^2$$

$$= \square x^2 - y^2$$

Q26

Choose the shapes which could be successfully *ENTERED*.

- octagon
- pyramid
- cube
- triangle
- square



Which shapes would return a *YES* for the first question?

- square
- hexagon
- rhombus
- pentagon
- kite

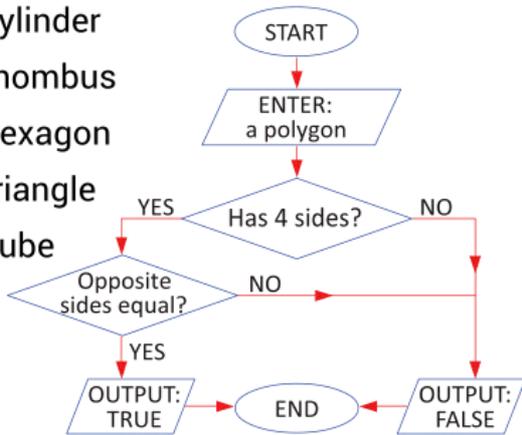
Choose the shapes which would return a *FALSE* output.

- triangle
- rectangle
- rhombus
- hexagon
- kite

Q27

Choose the shapes which could be successfully *ENTERED*.

- cylinder
- rhombus
- hexagon
- triangle
- cube



Which shapes would return a *YES* for the first question?

- triangle
- hexagon
- rhombus
- pentagon
- kite

Choose the shapes which would return a *TRUE* output.

- trapezium
- rectangle
- rhombus
- hexagon
- square

Q28

If $C = \sqrt{a^2 + b^2}$, find the value of a when $C = 10$, $b = 6$. (a is positive)

$a =$

Q29

If $C = \sqrt{a^2 + b^2}$, find the value of b when $C = 97$, $a = 72$. (b is positive)

$b =$

Q30

$W = \frac{1}{2}m(v^2 - u^2)$. Find v when $W = 1056$, $m = 12$, $u = 7$. (v is positive)

$v =$