MATH MASTER QUIZ

■ Algebra 1 (Q1–Q10) · ■ Geometry (Q11–Q20)

Name: _____ Date: _____ Score: _____ / 20

★ Each question has 3 steps. Answer all 3 correctly for full credit. ★ Circle your answer for each step. ★ Use back of paper for work.

■ Algebra 1 — Questions 1–10

Q1: Solving Linear Equations [Algebra 1]

■ KEY CONCEPT

To solve an equation, perform the same operation on both sides to isolate the variable.

ax + b = c → x = (c - b) / a

Example: 2x + 3 = 11 → 2x = 8 → x = 4

Formula: ax + b = c → Subtract b, then divide by a

Step 1 of 3 · All 3 correct = Full Credit ■

Solve for x: 3x + 5 = 20

(A) A) x = 3

(B) B) x = 5

(C) C) x = 7

(D) D) x = 8

Step 2 of 3 · All 3 correct = Full Credit ■

Solve for x: 4x – 8 = 12

(A) A) x = 4

(B) B) x = 5

(C) C) x = 6

(D) D) x = 7

Step 3 of 3 · All 3 correct = Full Credit ■

Solve for x: 2x + 7 = 19

(A) A) x = 5

(B) B) x = 6

(C) C) x = 7

(D) D) x = 13

Q2: Slope-Intercept Form [Algebra 1]

■ KEY CONCEPT

y = mx + b: m = slope, b = y-intercept

Slope = rise / run = (y2-y1)/(x2-x1)

Formula: y = mx + b

Step 1 of 3 · All 3 correct = Full Credit ■

What is the slope of: y = 3x – 7?

(A) A) m = –7

(B) B) m = 3

(C) C) m = 7

(D) D) m = –3

Step 2 of 3 · All 3 correct = Full Credit ■

What is the y-intercept of: y = –2x + 5?

(A) A) b = –2

(B) B) b = 2

(C) C) b = 5

(D) D) b = –5

Step 3 of 3 · All 3 correct = Full Credit ■

Which equation has slope = –4 and y-intercept = 2?

(A) A) y = 2x – 4

(B) B) y = 4x + 2

(C) C) y = –4x + 2

(D) D) y = –4x – 2

Q3: Systems of Equations [Algebra 1]

■ KEY CONCEPT

Use substitution or elimination to solve for two variables.

Add/subtract equations to eliminate one variable.

Formula: x + y = a and x - y = b → Add: 2x = a+b

Step 1 of 3 · All 3 correct = Full Credit ■

Solve: x + y = 10 and x – y = 2

(A) A) x=5,y=5

(B) B) x=6,y=4

(C) C) x=7,y=3

(D) D) x=8,y=2

Step 2 of 3 · All 3 correct = Full Credit ■

If 2x + y = 9 and x = 3, what is y?

(A) A) y = 1

(B) B) y = 2

(C) C) y = 3

(D) D) y = 6

Step 3 of 3 · All 3 correct = Full Credit ■

Which point satisfies both y = 2x and x + y = 6?

(A) A) (1, 2)

(B) B) (2, 4)

(C) C) (3, 6)

(D) D) (4, 8)

Q4: Polynomials & Factoring [Algebra 1]

■ KEY CONCEPT

To factor $x^2 + bx + c$, find two numbers that multiply to c and add to b.

Difference of Squares: $a^2 - b^2 = (a+b)(a-b)$

Formula: $x^2 + bx + c = (x + p)(x + q)$ where $p \cdot q = c$, $p + q = b$

Step 1 of 3 · All 3 correct = Full Credit ■

Factor: $x^2 + 7x + 12$

(A) A) (x+2)(x+6)

(B) B) (x+3)(x+4)

(C) C) (x+1)(x+12)

(D) D) (x+6)(x+1)

Step 2 of 3 · All 3 correct = Full Credit ■

Factor completely: $x^2 - 9$

(A) A) $(x-3)^2$

(B) B) (x+9)(x–1)

(C) C) (x+3)(x–3)

(D) D) (x–9)(x+1)

Step 3 of 3 · All 3 correct = Full Credit ■

What are the solutions of $x^2 - 5x + 6 = 0$?

(A) A) x=1, x=6

(B) B) x=2, x=3

(C) C) x=–2, x=–3

(D) D) x=5, x=6

Q5: Inequalities [Algebra 1]

■ KEY CONCEPT

Same as equations, BUT: flip the inequality when multiplying or dividing by a negative!

$-2x > 6 \rightarrow x < -3$ (sign flips!)

Formula: Multiply/divide by negative → FLIP the sign!

Step 1 of 3 · All 3 correct = Full Credit ■

Solve: $2x + 3 > 11$

(A) A) $x > 3$

(B) B) $x > 4$

(C) C) $x > 5$

(D) D) $x > 7$

Step 2 of 3 · All 3 correct = Full Credit ■

Solve: $-3x \leq 12$

(A) A) $x \leq -4$

(B) B) $x \leq 4$

(C) C) $x \geq -4$

(D) D) $x \geq 4$

Step 3 of 3 · All 3 correct = Full Credit ■

Which values satisfy $-2 \leq x + 1 < 5$?

(A) A) $-3 \leq x < 4$

(B) B) $-1 \leq x < 6$

(C) C) $-3 \leq x < 6$

(D) D) $-1 \leq x < 4$

Q6: Functions & Domain/Range

[Algebra 1]

■ KEY CONCEPT

A function maps each input (domain) to exactly ONE output (range).

f(x) notation means "function of x"

Formula: f(x) = 2x + 1 → f(3) = 2(3)+1 = 7

Step 1 of 3 · All 3 correct = Full Credit ■

If f(x) = 3x – 2, what is f(4)?

(A) A) 8

(B) B) 10

(C) C) 12

(D) D) 14

Step 2 of 3 · All 3 correct = Full Credit ■

Which set of ordered pairs is NOT a function?

(A) A) {(1,2),(3,4),(5,6)}

(B) B) {(1,2),(1,3),(2,4)}

(C) C) {(2,4),(3,4),(5,4)}

(D) D) {(0,1),(1,2),(2,3)}

Step 3 of 3 · All 3 correct = Full Credit ■

What is the range of f(x) = x² for domain {–2,–1,0,1,2}?

(A) A) {–4,–1,0,1,4}

(B) B) {0,1,2,3,4}

(C) C) {0,1,4}

(D) D) {1,4}

Q7: Exponent Rules

[Algebra 1]

■ KEY CONCEPT

Product: a^m · a^n = a^(m+n)

Quotient: a^m ÷ a^n = a^(m-n)

Power: (a^m)^n = a^(mn)

Zero: a^0 = 1

Formula: x^3 · x^5 = x^8 | (x^4)^3 = x^12 | x^6 ÷ x^2 = x^4

Step 1 of 3 · All 3 correct = Full Credit ■

Simplify: x³ · x■

(A) A) x^8

(B) B) x^15

(C) C) x^2

(D) D) x^85

Step 2 of 3 · All 3 correct = Full Credit ■

Simplify: (x■)³

(A) A) x^7

(B) B) x^43

(C) C) x^12

(D) D) x

Step 3 of 3 · All 3 correct = Full Credit ■

Simplify: x■ ÷ x²

(A) A) x^3

(B) B) x^4

(C) C) x^8

(D) D) x^12

Q8: Graphing & Intercepts [Algebra 1]

■ KEY CONCEPT

X-intercept: set y=0 and solve. Y-intercept: set x=0 and solve.

Slope between two points: m = (y2–y1)/(x2–x1)

Formula: 2x + 3y = 12 → x-int: (6,0), y-int: (0,4)

Step 1 of 3 · All 3 correct = Full Credit ■

Find the x-intercept of 3x + 4y = 24

(A) A) (6, 0)

(B) B) (8, 0)

(C) C) (0, 6)

(D) D) (4, 0)

Step 2 of 3 · All 3 correct = Full Credit ■

Find the y-intercept of 5x – 2y = 10

(A) A) (0, 2)

(B) B) (0, –5)

(C) C) (0, 5)

(D) D) (0, –2)

Step 3 of 3 · All 3 correct = Full Credit ■

What is the slope between (2, 3) and (6, 11)?

(A) A) m = 1

(B) B) m = 2

(C) C) m = 3

(D) D) m = 4

Q9: Quadratic Formula [Algebra 1]

■ KEY CONCEPT

For $ax^2 + bx + c = 0$: $x = (-b \pm \sqrt{(b^2-4ac)}) / (2a)$

Discriminant b^2-4ac: >0 two solutions, =0 one, <0 none

Formula: $x = (-b \pm \sqrt{(b^2-4ac)}) / (2a)$

Step 1 of 3 · All 3 correct = Full Credit ■

For $x^2 - 5x + 6 = 0$, what is the discriminant (b^2-4ac)?

(A) A) 1

(B) B) 5

(C) C) 25

(D) D) 49

Step 2 of 3 · All 3 correct = Full Credit ■

Solve using quadratic formula: $x^2 + 2x - 3 = 0$

(A) A) x=1,x=–3

(B) B) x=–1,x=3

(C) C) x=3,x=1

(D) D) x=–3,x=1

Step 3 of 3 · All 3 correct = Full Credit ■

How many real solutions does $2x^2 + x + 5 = 0$ have?

(A) A) 0

(B) B) 1

(C) C) 2

(D) D) 3

Q10: Proportions & Percent [Algebra 1]

■ KEY CONCEPT

Proportion: a/b = c/d → cross multiply: ad = bc

Percent Change = (New–Old)/Old × 100%

Formula: a/b = c/d → ad = bc

Step 1 of 3 · All 3 correct = Full Credit ■

Solve the proportion: 5/8 = x/40

(A) A) x = 20

(B) B) x = 25

(C) C) x = 30

(D) D) x = 35

Step 2 of 3 · All 3 correct = Full Credit ■

A price went from $80 to $100. Percent increase?

(A) A) 15%

(B) B) 20%

(C) C) 25%

(D) D) 30%

Step 3 of 3 · All 3 correct = Full Credit ■

If 60% of a number is 48, what is the number?

(A) A) 70

(B) B) 75

(C) C) 80

(D) D) 90

■ Geometry — Questions 11–20

Q11: Angle Relationships [Geometry]

■ KEY CONCEPT

Supplementary angles sum to 180°. Complementary angles sum to 90°.

Vertical angles are equal (opposite angles formed by intersecting lines).

Formula: Supp: ∠A + ∠B = 180° | Comp: ∠A + ∠B = 90°

Step 1 of 3 · All 3 correct = Full Credit ■

Two angles are supplementary. One angle is 73°. Find the other.

(A) A) 17°

(B) B) 97°

(C) C) 107°

(D) D) 127°

Step 2 of 3 · All 3 correct = Full Credit ■

Angles A and B are complementary. ∠A = 34°. Find ∠B.

(A) A) 46°

(B) B) 56°

(C) C) 66°

(D) D) 146°

Step 3 of 3 · All 3 correct = Full Credit ■

Vertical angles: (3x+10)° and (5x−20)°. Find x.

(A) A) x=10

(B) B) x=15

(C) C) x=20

(D) D) x=25

Q12: Triangle Properties [Geometry]

■ KEY CONCEPT

Sum of triangle angles = 180°.

Isosceles triangle: 2 equal sides → 2 equal base angles.

Exterior angle = sum of two non-adjacent interior angles.

Formula: ∠A + ∠B + ∠C = 180°

Step 1 of 3 · All 3 correct = Full Credit ■

A triangle has angles 55° and 80°. Find the third angle.

(A) A) 35°

(B) B) 40°

(C) C) 45°

(D) D) 50°

Step 2 of 3 · All 3 correct = Full Credit ■

Isosceles triangle with vertex angle 40°. Find each base angle.

(A) A) 60°

(B) B) 70°

(C) C) 80°

(D) D) 140°

Step 3 of 3 · All 3 correct = Full Credit ■

Exterior angle = 120°. One non-adjacent interior = 50°. Find the other.

(A) A) 60°

(B) B) 70°

(C) C) 80°

(D) D) 90°

Q13: Pythagorean Theorem [Geometry]

■ KEY CONCEPT

In a right triangle: $a^2 + b^2 = c^2$ (c = hypotenuse)

Common triples: 3-4-5, 5-12-13, 8-15-17

Formula: $a^2 + b^2 = c^2$

Step 1 of 3 · All 3 correct = Full Credit ■

Right triangle with legs 5 and 12. Find the hypotenuse.

(A) A) c = 11

(B) B) c = 13

(C) C) c = 15

(D) D) c = 17

Step 2 of 3 · All 3 correct = Full Credit ■

Hypotenuse = 10, one leg = 6. Find the other leg.

(A) A) b = 6

(B) B) b = 7

(C) C) b = 8

(D) D) b = 9

Step 3 of 3 · All 3 correct = Full Credit ■

Which set of numbers forms a right triangle?

(A) A) 4, 5, 6

(B) B) 5, 12, 13

(C) C) 6, 7, 9

(D) D) 7, 8, 10

Q14: Area & Perimeter [Geometry]

■ KEY CONCEPT

Rectangle: A = lw, P = 2(l+w)

Triangle: A = (1/2)bh

Circle: A = πr^2, Circumference = $2\pi r$

Formula: A(triangle) = ½bh | A(circle) = πr^2

Step 1 of 3 · All 3 correct = Full Credit ■

Triangle: base = 10 cm, height = 6 cm. Find the area.

(A) A) 30 cm²

(B) B) 60 cm²

(C) C) 40 cm²

(D) D) 16 cm²

Step 2 of 3 · All 3 correct = Full Credit ■

Circle with radius 7. Find the area. ($\pi \approx 3.14$)

(A) A) 43.96

(B) B) 87.92

(C) C) 153.86

(D) D) 196.00

Step 3 of 3 · All 3 correct = Full Credit ■

Rectangle: perimeter = 36 cm, length = 12 cm. Find the width.

(A) A) w = 3

(B) B) w = 6

(C) C) w = 9

(D) D) w = 12

Q15: Surface Area & Volume [Geometry]

■ KEY CONCEPT

Rectangular Prism: V = lwh, SA = 2(lw+lh+wh)

Cylinder: V = $\pi r^2 h$, SA = $2\pi r^2 + 2\pi rh$

Cube: SA = $6s^2$

Formula: V(prism) = lwh | V(cylinder) = $\pi r^2 h$

Step 1 of 3 · All 3 correct = Full Credit ■

Rectangular box 5 cm × 4 cm × 3 cm. Find the volume.

(A) A) 40 cm³

(B) B) 60 cm³

(C) C) 80 cm³

(D) D) 120 cm³

Step 2 of 3 · All 3 correct = Full Credit ■

Cylinder: radius = 3, height = 10. Volume? ($\pi \approx 3.14$)

(A) A) 94.2

(B) B) 188.4

(C) C) 282.6

(D) D) 376.8

Step 3 of 3 · All 3 correct = Full Credit ■

Cube with side 4 cm. Find the surface area.

(A) A) 64 cm²

(B) B) 80 cm²

(C) C) 96 cm²

(D) D) 128 cm²

Q16: Similarity & Congruence [Geometry]

■ KEY CONCEPT

Similar figures (~): same shape, proportional sides.

Congruent figures (≅): same shape AND same size.

Congruence: SSS, SAS, ASA, AAS, HL

Formula: Similar: a/b = c/d = e/f (corresponding sides)

Step 1 of 3 · All 3 correct = Full Credit ■

Similar triangles, ratio 2:3. Small side = 8. Find large side.

(A) A) 10 **(B)** B) 12

(C) C) 14 **(D)** D) 16

Step 2 of 3 · All 3 correct = Full Credit ■

Which theorem proves congruence by two sides and the INCLUDED angle?

(A) A) SSS **(B)** B) SAS

(C) C) ASA **(D)** D) AAS

Step 3 of 3 · All 3 correct = Full Credit ■

■ABC ~ ■DEF. AB=6, DE=9, BC=8. Find EF.

(A) A) EF=10 **(B)** B) EF=11

(C) C) EF=12 **(D)** D) EF=14

Q17: Coordinate Geometry [Geometry]

■ KEY CONCEPT

Distance: d = √((x■–x■)² + (y■–y■)²)

Midpoint: M = ((x■+x■)/2, (y■+y■)/2)

Formula: d=√((x2-x1)²+(y2-y1)²) | M=((x1+x2)/2,(y1+y2)/2)

Step 1 of 3 · All 3 correct = Full Credit ■

Find the midpoint of A(2, 4) and B(8, 10).

(A) A) (4, 6)

(B) B) (5, 7)

(C) C) (6, 7)

(D) D) (5, 6)

Step 2 of 3 · All 3 correct = Full Credit ■

Distance between P(1, 1) and Q(4, 5).

(A) A) d = 3

(B) B) d = 4

(C) C) d = 5

(D) D) d = 6

Step 3 of 3 · All 3 correct = Full Credit ■

Midpoint of AB is M(3,6). A=(1,2). Find B.

(A) A) B=(4,8)

(B) B) B=(5,10)

(C) C) B=(2,4)

(D) D) B=(6,12)

Q18: Circle Theorems [Geometry]

■ KEY CONCEPT

Inscribed angle = ½ × intercepted arc

Central angle = intercepted arc

Semicircle inscribed angle = 90°

Tangent ⊥ radius at point of tangency

Formula: Inscribed angle = ½ × arc

Step 1 of 3 · All 3 correct = Full Credit ■

Inscribed angle intercepts an arc of 100°. Find the angle.

(A) A) 30°

(B) B) 40°

(C) C) 50°

(D) D) 100°

Step 2 of 3 · All 3 correct = Full Credit ■

A central angle and its intercepted arc are:

(A) A) Supplementary

(B) B) Complementary

(C) C) Equal

(D) D) Differ by 90°

Step 3 of 3 · All 3 correct = Full Credit ■

Two tangents from external point; arcs = 200° and 160°. Find the angle.

(A) A) 10°

(B) B) 20°

(C) C) 30°

(D) D) 40°

Q19: Transformations [Geometry]

■ KEY CONCEPT

Translation (x,y)→(x+a,y+b)

Reflection over x-axis: (x,y)→(x,–y)

Reflection over y-axis: (x,y)→(–x,y)

Rotation 90° CCW: (x,y)→(–y,x)

Formula: Reflection x-axis: (x,y)→(x,–y) | 90°CCW: (x,y)→(–y,x)

Step 1 of 3 · All 3 correct = Full Credit ■

A(3, 5) reflected over the x-axis. Find the image.

(A) A) (–3, 5)

(B) B) (3, –5)

(C) C) (–3, –5)

(D) D) (5, 3)

Step 2 of 3 · All 3 correct = Full Credit ■

B(–2, 4) translated by (3, –1). Find B'.

(A) A) (1, 3)

(B) B) (–5, 5)

(C) C) (1, 5)

(D) D) (5, 3)

Step 3 of 3 · All 3 correct = Full Credit ■

C(4, 2) rotated 90° counterclockwise. Find C'.

(A) A) (2, 4)

(B) B) (–2, 4)

(C) C) (4, –2)

(D) D) (–4, 2)

Q20: Special Right Triangles [Geometry]

■ KEY CONCEPT

45-45-90: sides = x, x, x√2 (legs equal; hyp = leg × √2)

30-60-90: sides = x, x√3, 2x (hyp = 2 × short leg)

Formula: 45-45-90: hyp=x√2 | 30-60-90: hyp=2x, long leg=x√3

Step 1 of 3 · All 3 correct = Full Credit ■

45°-45°-90° triangle, one leg = 6. Find the hypotenuse.

(A) A) 6√2

(B) B) 6√3

(C) C) 12

(D) D) 3√2

Step 2 of 3 · All 3 correct = Full Credit ■

30°-60°-90° triangle, short leg = 5. Find the hypotenuse.

(A) A) 5

(B) B) 5√3

(C) C) 10

(D) D) 10√3

Step 3 of 3 · All 3 correct = Full Credit ■

30°-60°-90° triangle, hypotenuse = 14. Find the long leg.

(A) A) 7

(B) B) 7√2

(C) C) 7√3

(D) D) 14√3

■ ANSWER KEY + EXPLANATIONS

Q1: Solving Linear Equations (Algebra 1)

Step 1	Answer: B	3x = 15 → x = 5
Step 2	Answer: B	4x = 20 → x = 5
Step 3	Answer: B	2x = 12 → x = 6

Q2: Slope-Intercept Form (Algebra 1)

Step 1	Answer: B	Coefficient of x is the slope: m = 3
Step 2	Answer: C	b is the constant: b = 5
Step 3	Answer: C	y = mx + b → y = –4x + 2

Q3: Systems of Equations (Algebra 1)

Step 1	Answer: B	Add: 2x=12→x=6, then y=4
Step 2	Answer: C	2(3)+y=9 → y=3
Step 3	Answer: B	x+2x=6→x=2, y=4: (2,4)

Q4: Polynomials & Factoring (Algebra 1)

Step 1	Answer: B	3×4=12, 3+4=7 → (x+3)(x+4)
Step 2	Answer: C	Difference of Squares: (x+3)(x–3)
Step 3	Answer: B	(x-2)(x-3)=0 → x=2 or x=3

Q5: Inequalities (Algebra 1)

Step 1	Answer: B	2x > 8 → x > 4
Step 2	Answer: C	Divide by –3 and FLIP: x ≥ –4
Step 3	Answer: A	Subtract 1 from all: –3 ≤ x < 4

Q6: Functions & Domain/Range (Algebra 1)

Step 1	Answer: B	f(4)=3(4)–2=12–2=10
Step 2	Answer: B	x=1 maps to both 2 and 3 — not a function!
Step 3	Answer: C	Outputs: 4,1,0,1,4 → unique: {0,1,4}

Q7: Exponent Rules (Algebra 1)

Step 1	Answer: A	Product rule: x^(3+5) = x^8
Step 2	Answer: C	Power rule: x^(4×3) = x^12
Step 3	Answer: B	Quotient rule: x^(6-2) = x^4

Q8: Graphing & Intercepts (Algebra 1)

Step 1	Answer: B	Set y=0: 3x=24 → x=8, so (8,0)
Step 2	Answer: B	Set x=0: −2y=10 → y=−5, so (0,−5)
Step 3	Answer: B	m=(11−3)/(6−2)=8/4=2

Q9: Quadratic Formula (Algebra 1)

Step 1	Answer: A	$(-5)^2-4(1)(6)=25-24=1$
Step 2	Answer: D	$x=(-2\pm\sqrt{16})/2$ → x=1 or x=−3
Step 3	Answer: A	$b^2-4ac=1-40=-39<0$ → no real solutions

Q10: Proportions & Percent (Algebra 1)

Step 1	Answer: B	8x=200 → x=25
Step 2	Answer: C	(100−80)/80×100=25%
Step 3	Answer: C	0.6n=48 → n=80

Q11: Angle Relationships (Geometry)

Step 1	Answer: C	180−73=107°
Step 2	Answer: B	90−34=56°
Step 3	Answer: B	3x+10=5x−20 → 2x=30 → x=15

Q12: Triangle Properties (Geometry)

Step 1	Answer: C	180−55−80=45°
Step 2	Answer: B	(180−40)/2=70°
Step 3	Answer: B	Exterior = sum: 120=50+x → x=70°

Q13: Pythagorean Theorem (Geometry)

Step 1	Answer: B	$5^2+12^2=25+144=169$ → c=13
Step 2	Answer: C	$b^2=100-36=64$ → b=8
Step 3	Answer: B	$5^2+12^2=169=13^2$ ✓

Q14: Area & Perimeter (Geometry)

Step 1	Answer: A	A=½(10)(6)=30 cm²
Step 2	Answer: C	A=3.14×49=153.86
Step 3	Answer: B	36=2(12+w) → w=6

Q15: Surface Area & Volume (Geometry)

Step 1	Answer: B	V=5×4×3=60 cm³
Step 2	Answer: C	V=3.14×9×10=282.6
Step 3	Answer: C	$SA=6\times4^2=6\times16=96$ cm²

Q16: Similarity & Congruence (Geometry)		
Step 1	Answer: B	2/3=8/x → x=12
Step 2	Answer: B	SAS = Side-Angle-Side (included angle)
Step 3	Answer: C	6/9=8/EF → EF=12

Q17: Coordinate Geometry (Geometry)		
Step 1	Answer: B	M=((2+8)/2,(4+10)/2)=(5,7)
Step 2	Answer: C	d=√(9+16)=√25=5
Step 3	Answer: B	(1+Bx)/2=3→Bx=5; (2+By)/2=6→By=10

Q18: Circle Theorems (Geometry)		
Step 1	Answer: C	Inscribed angle = ½×100°=50°
Step 2	Answer: C	Central angle = arc measure (equal)
Step 3	Answer: B	½|200–160|=½(40)=20°

Q19: Transformations (Geometry)		
Step 1	Answer: B	x-axis reflection: (x,y)→(x,–y)→(3,–5)
Step 2	Answer: A	(–2+3, 4–1)=(1,3)
Step 3	Answer: B	90° CCW: (x,y)→(–y,x)→(–2,4)

Q20: Special Right Triangles (Geometry)		
Step 1	Answer: A	Hyp = leg × √2 = 6√2
Step 2	Answer: C	Hyp = 2 × short leg = 10
Step 3	Answer: C	Short leg=7; long leg=7√3