وزارة التربية و التعليم

Term-3

Mathematics

2025-2026

EOT Term-3-

AL-QUDRA SCHOOL

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Grade 12 General

نموذج اختبار-1-

2025-2026

جزء -2-

Q16

Simplify:

$$\frac{14xy^2z^3}{21w^4x^2z} \cdot \frac{7wxyz}{12w^2y^3z}$$

- ○ $\frac{z^2}{18w^3}$
- ○ $\frac{7z}{18w^5}$
- ○ $\frac{7z^2}{18w^5}$
- ○ $\frac{7z}{18w^2}$

Q17

Find the horizontal asymptote of: $f(x) = \frac{2x+1}{x^3-4}$

- ○ $y = 0$
- ○ $y = \frac{5}{3}$
- ○ $y = \frac{3}{5}$
- ○ No horizontal asymptote

Q18

What is the parent reciprocal function?

- ○ $f(x) = x^2$
- ○ $f(x) = \frac{1}{x}$
- ○ $f(x) = |x|$
- ○ $f(x) = x$

LIVEWORKSHEETS

Q19

Which statement is true about the x-intercept of the parent function $f(x) = \frac{1}{x}$?

- It has one x-intercept
- It has two x-intercepts
- It has infinitely many
- None

Q20

Which value is NOT in the range of the parent reciprocal function

$f(x) = \frac{1}{x}$?

- 3
- $\frac{1}{3}$
- 2
- 0

Q21

What is the amplitude of the parent sine function $y = \sin x$?

- 0
- 1
- 360
- -1

LIVEWORKSHEETS

Q22

Identify the quadrants in which the graph of $f(x) = \frac{1}{x}$ lies:

- ○ Quadrants I and II
- ○ Quadrants II and III
- ○ Quadrants I and III
- ○ Quadrants III and IV

Q23

What is the horizontal asymptote of the parent function $f(x) = \frac{1}{x}$?

- ○ $x = 0$
- ○ $y = 1$
- ○ $y = 0$
- ○ $x = 1$

Q24

Simplify the product of the rational expressions:

$$\frac{3x}{8y} \cdot \frac{12x^2y}{9xy^3}$$

- ○ $\frac{y^3}{2x^2}$
- ○ $\frac{x^2}{8y^3}$
- ○ $\frac{x}{72y^3}$
- ○ $\frac{x^2}{2y^3}$

LIVEWORKSHEETS

Q25

Simplify the complex rational expression: $\dfrac{\frac{3x}{x-y}}{\frac{6xy}{x^2-y^2}}$

- ○ $\frac{x+y}{y}$
- ○ $\frac{x-y}{y}$
- ○ $\frac{x+y}{2y}$
- ○ $\frac{2(x+y)}{y}$

Q26

If the terminal side of angle θ intersects the unit circle at $P\left(-\frac{4}{5}, -\frac{3}{5}\right)$, find $\cos\theta$ and $\sin\theta$:

- ○ $\cos\theta = -\frac{3}{5}, \sin\theta = -\frac{4}{5}$
- ○ $\cos\theta = -\frac{4}{5}, \sin\theta = -\frac{3}{5}$
- ○ $\cos\theta = \frac{3}{5}, \sin\theta = \frac{4}{5}$
- ○ $\cos\theta = -\frac{5}{4}, \sin\theta = -\frac{3}{5}$

Q27

An angle of 475° in standard position has its terminal side in:

- ○ Quadrant I
- ○ Quadrant II
- ○ Quadrant III
- ○ Quadrant IV

Q28

Determine the coordinate x of the hole (point discontinuity) in the function $f(x) = \frac{x^2-4}{x+2}$

- $x = -3$
- $x = 4$
- $x = -2$
- $x = 8$

Q29

Simplify the quotient:

$$\frac{10d^5}{6cd} \div \frac{30c^3d^2}{4c}$$

- $\frac{d}{9c^3}$
- $\frac{2d^2}{9c^3}$
- $\frac{d^2}{9c^3}$
- $\frac{2d}{9c^2}$

Q30

What is the vertical asymptote of the parent function $f(x) = \frac{1}{x}$?

- $x = 0$
- $y = 1$
- $y = 0$
- $x = 1$