

Practice Worksheet — Grade 10 Mathematics

Free practice worksheet from Enzyme. Show your work in the space provided. Stuck on any of these? Every Enzyme tutor starts with a free 20-minute call and a free diagnostic set — enzyme.ink/tutors

Area perimeter

1. A rectangular garden has a length of $(x + 7)$ metres and a width of $(x + 3)$ metres. The area of the garden is 165 square metres. What is the value of x ?

Answer: _____

Factoring quadratics

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

- a) $(x+3)(x+4)$
- b) $(x+1)(x+12)$
- c) $(x+2)(x+6)$
- d) $(x-3)(x-4)$

3. Factor: $x^2 - 5x + 6$

- a) $(x-2)(x-3)$
- b) $(x-1)(x-6)$
- c) $(x+1)(x-6)$
- d) $(x+2)(x+3)$

Math10c expanding and factoring

4. Expand: $(x + 3)(x + 2)$

- a) $x^2 + 5x + 5$
- b) $x^2 + 6$
- c) $x^2 + 5$
- d) $x^2 + 5x + 6$
- e) $x^2 + 6x + 5$

5. Simplify and evaluate: $3x + 2x$ when $x = 4$

Answer: _____

Math10c primary trig ratios

6. A wheelchair ramp rises 1.2 m vertically over a horizontal distance of 7.5 m. What angle does the ramp make with the ground, in degrees, rounded to one decimal place?

Answer: _____ (°)

7. A right triangle has opposite side 3 and adjacent side 4. Find $\tan(\theta)$.

Answer: _____

Math10c slope and intercepts

8. A plumber charges a fixed call-out fee plus a steady hourly rate. A job lasting 3 hours is billed at \$215, and a job lasting 7 hours is billed at \$415. What is the plumber's hourly rate, in dollars per hour?

Answer: _____

9. If two lines are parallel, their slopes are:

- a) opposite
- b) unrelated
- c) negative reciprocals
- d) equal

Math10c volume and surface area

10. A rectangular prism has length 5 m, width 3 m, and height 4 m. Find its volume.

Answer: _____ (m^3)

11. A sphere has radius 3 cm. Find its volume ($V = \frac{4}{3}\pi r^3$, use $\pi \approx 3.14$, round to nearest whole number).

Answer: _____ (cm^3)

Math10c word problems

12. A bakery receives a flour delivery every 12 days and a sugar delivery every 18 days. Both deliveries arrived today. In how many days will the two deliveries next arrive on the same day?

Answer: _____ (days)

13. A wheelchair ramp rises 1.2 m over a horizontal run of 8.0 m. What angle does the ramp make with the ground, to the nearest tenth of a degree?

Answer: _____ ($^\circ$)

Radicals

14. Simplify: $\sqrt{49}$

Answer: _____

15. Evaluate: $\sqrt{(9 \times 16)}$

Answer: _____

Slope

16. Find the slope between (2, 3) and (6, 11).

Answer: _____

17. What is the slope of a horizontal line?

Answer: _____

Trig ratios

18. A right triangle has opposite side 3 and hypotenuse 5. Find $\sin(\theta)$.

Answer: _____

19. A right triangle has adjacent side 4 and hypotenuse 5. Find $\cos(\theta)$.

Answer: _____

Volume capacity

20. Which formula gives the volume of a rectangular prism?

- a) $2(lw + lh + wh)$
- b) $l^2 \times h$
- c) $l \times w \times h$
- d) $l + w + h$