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ACT Practice Paper 4

English | Maths | Reading | Science

Section-wise answer keys with explanations

About This Paper

This is a Yocket original practice paper that follows the structure of the ACT. It contains 50 questions across four sections. Every passage and question is written by Yocket, so you can attempt it as a timed mock.

Section	Questions	Suggested time	What it tests
1. English	15	11 minutes	Grammar, punctuation, sentence structure, rhetorical skills
2. Maths	15	17 minutes	Algebra, geometry, statistics, probability, trigonometry
3. Reading	10	11 minutes	Main idea, detail, inference, vocabulary in context
4. Science	10	10 minutes	Reading tables, spotting variables, drawing conclusions

Suggested times follow the per-question pace of the full ACT sections, scaled down to this shorter paper.

How to Use It

- **Set a timer:** attempt each section in one sitting and stop when the suggested time ends.
- **Work on paper:** circle your answers, and keep the answer key closed until you finish the section.
- **Review every miss:** the key explains the reasoning, so you learn the method and not only the answer.
- **Treat your score as a diagnostic:** a short paper cannot produce an official ACT scale score, so use it to find your weak sections.

Section 1

English

15 questions | Suggested time: 11 minutes | Choose the best answer for each underlined portion or question. Choose NO CHANGE if the underlined portion is already correct.

Passage I: Cooking With the Sun

A solar cooker uses reflective panels to focus sunlight onto a dark pot. Families can boil water, **[1]**baking bread, and to steam rice without burning any fuel. Solar cooking is slow**[2]**; a pot of rice can take two hours.

The method has limits. Cooks cannot use it at night or on cloudy days, so many families keep a second stove for those times. **[3]**Some cooks paint their pots in bright colours. **[4]**Still, the savings are real: a family that stops buying firewood or gas keeps that money for food, school fees, and medicine. **[5]**

1.

- **A.** NO CHANGE
- **B.** to bake bread, and steam
- **C.** bake bread, and steam
- **D.** baking bread, and steaming

2.

- **A.** NO CHANGE
- **B.** , a pot of rice can take two hours.
- **C.** ; and a pot of rice can take two hours.
- **D.** a pot of rice can take two hours.

3. The writer is considering deleting the underlined sentence (Some cooks paint their pots in bright colours). Should the writer delete it?

- **A.** No, because it explains why solar cookers fail on cloudy days.
- **B.** No, because it gives the main reason families use solar cookers.
- **C.** Yes, because it contradicts the previous sentence.
- **D.** Yes, because it adds a detail unrelated to the limits of solar cooking.

4.

- **A.** NO CHANGE
- **B.** Likewise,
- **C.** As a result,
- **D.** Subsequently,

5. Which choice best concludes the essay?

- **A.** Solar cookers work only in daylight, but for families who use them, each sunny hour cuts the cost of cooking.
- **B.** Some pots are better than others for cooking rice.
- **C.** Mirrors have been used for many purposes throughout history.
- **D.** Sunlight contains visible and invisible forms of radiation.

Passage II: Learning the Cello

When I started the cello at twelve, I could not produce a single clean note. The bow scratched, the strings buzzed, and my teacher, Mr Okafor, winced politely. My bow **[6]**laid across my knees while **[7]**Mr Okafors advice echoed in my head: slow bows, patient fingers, no hurry. **[8]**

[9]Practising for twenty minutes every evening, my fingers slowly found the right places on the neck. **[10]**

6.

- **A.** NO CHANGE
- **B.** lying
- **C.** lays
- **D.** lay

7.

- **A.** NO CHANGE
- **B.** Mr Okafor's advice
- **C.** Mr Okafors' advice
- **D.** Mr Okafors advice

8. Which choice best shows the narrator's gradual progress?

- **A.** The cello is larger than the violin.
- **B.** December is the coldest month in many countries.
- **C.** Folk tunes are often passed down by ear.
- **D.** By December, the scratching had faded, and whole phrases of a simple folk tune emerged between the strings.

9.

- **A.** NO CHANGE
- **B.** Practising for twenty minutes every evening, my fingers slowly began to find
- **C.** After practising for twenty minutes every evening, my fingers found
- **D.** Practising for twenty minutes every evening, I slowly found

10. Which choice best ends the passage by returning to the opening?

- **A.** Mr Okafor has taught the cello for many years.
- **B.** Last week I played a whole piece for the school orchestra without a single scratch, and Mr Okafor did not wince once.
- **C.** Cello strings are made of steel or gut.
- **D.** The school orchestra meets on Wednesdays.

Passage III: Green Roofs

Cities trap heat because concrete, brick, and asphalt absorb sunlight and release it slowly at night. A green roof, which is a layer of soil and plants on top of a building, **[11]**help reduce this effect. The plants shade the roof and cool the air as water evaporates from their leaves. Green roofs also absorb rainwater**[12]**; reducing the amount that floods drains in heavy storms.

[S1] **[13]** The savings from lower energy bills, however, add up over time. **[S2]** Green roofs cost more to install than ordinary roofs. **[S3]** They need extra waterproofing and a stronger structure to carry the **[14]**soils weight. **[15]**

11.

A. NO CHANGE
B. help
C. are helping
D. helps

12.

A. NO CHANGE
B. . Reducing
C. : reducing
D. , reducing

13. For the sake of logic, sentence S1 (The savings from lower energy bills, however, add up over time) is best placed:

A. after sentence S3.
B. after sentence S2.
C. at the end of the first paragraph.
D. where it is now.

14.

A. NO CHANGE
B. soils' weight
C. soil weight's
D. soil's weight

15. Which choice best concludes the passage?

A. A higher price at installation buys cooler buildings, cleaner drains, and lower bills for years afterwards.
B. Concrete is one of the most widely used building materials.
C. Roofs can be made from tiles, slate, or metal.
D. Some plants grow better in shade.

Answer Key: Section 1, English

Mark your paper, then count your correct answers. Read the explanation for every question you missed or guessed.

Q	Answer	Why it is correct
1	**C**	The verbs after *can* must match: *boil, bake, and steam*.
2	**A**	A semicolon correctly joins two complete sentences that are closely related.
3	**D**	The paragraph is about limits and savings. The pot colours do not support either point.
4	**A**	*Still* signals that the savings remain real despite the limits. The other transitions do not fit the logic.
5	**A**	It restates the limit and the benefit. The others add unrelated facts.
6	**D**	*Lay* is the past tense of the intransitive verb *lie*. *Laid* needs an object.
7	**B**	The possessive of the singular name *Okafor* is *Okafor's*.
8	**D**	It shows improvement over time. The others are general facts.
9	**D**	The opening phrase needs a person as its subject. In the other choices, the fingers appear to be practising.
10	**B**	It contrasts directly with the opening scratches and the wince.
11	**D**	The subject is the singular *green roof*. The phrase between the commas does not change that.
12	**D**	A comma attaches the participle phrase to the main clause. A semicolon needs a complete clause.
13	**A**	*However* contrasts the long-term savings with the costs, so the sentence must follow the cost sentences S2 and S3.
14	**D**	The weight belongs to the soil, so the singular possessive is *soil's*.
15	**A**	It sums up the costs and the benefits the passage describes.

Your score: _____ / 15

13 to 15 correct: strong. **9 to 12:** review the missed topics. **Below 9:** revisit the basics before your next paper.

Section 2

Maths

15 questions | Suggested time: 17 minutes | Solve each problem and choose the best answer. A calculator is allowed. Figures are not necessarily drawn to scale.

1. What is 2/3 of 3/4 of 120?

A. 30
B. 60
C. 80
D. 90

2. What is the sum of the solutions to $|x - 4| = 7$?

A. 4
B. 8
C. 11
D. 14

3. Six workers build a wall in 10 days. Working at the same rate, how many days would 15 workers need?

A. 4
B. 6
C. 10
D. 25

4. A line is parallel to $y = 2x + 3$ and passes through (1, 7). What is its y-value when $x = 4$?

A. 11
B. 13
C. 15
D. 19

5. What is the measure of each interior angle of a regular hexagon?

A. 60°
B. 108°
C. 120°
D. 135°

6. What is the range of the data set 3, 8, 8, 12, 19?

A. 8
B. 10
C. 16
D. 19

7. Events A and B are independent, with P(A) = 0.3 and P(B) = 0.5. What is P(A and B)?

A. 0.15
B. 0.2
C. 0.65
D. 0.8

8. $1,000 is invested at 10% interest compounded annually. What is the balance after 2 years?

A. $1,100
B. $1,200
C. $1,210
D. $1,331

9. A rectangular box measures 4 cm by 5 cm by 6 cm. What is its total surface area?

A. 74 cm^2
B. 120 cm^2
C. 148 cm^2
D. 296 cm^2

10. Two numbers have a sum of 25 and a difference of 7. What is the larger number?

A. 9
B. 16
C. 18
D. 25

11. If $f(x) = 2x + 1$ and $g(x) = x^2$, what is $g(f(3))$?

A. 19
B. 36
C. 49
D. 169

12. What is the value of x if $3^{x+1} = 81$?

A. 2
B. 3
C. 4
D. 27

13. A rectangle's length is 5 cm more than its width, and its area is 84 cm^2. What is its width?

A. 5 cm
B. 7 cm
C. 12 cm
D. 14 cm

14. The angles of a triangle are in the ratio 2 : 3 : 4. What is the largest angle?

A. 40°
B. 60°
C. 80°
D. 90°

15. In a right triangle, θ is acute and $\cos \theta = 3/5$. What is $\tan \theta$?

A. 3/4
B. 4/5
C. 4/3
D. 5/3

Answer Key: Section 2, Maths

Mark your paper, then count your correct answers. Read the explanation for every question you missed or guessed.

Q	Answer	Why it is correct
1	**B**	3/4 of 120 is 90, and 2/3 of 90 is 60.
2	**B**	$x - 4 = 7$ or $x - 4 = -7$, so $x = 11$ or $x = -3$. The sum is 8.
3	**A**	The job takes $6 \times 10 = 60$ worker-days. With 15 workers, it takes $60 \div 15 = 4$ days.
4	**B**	The slope is 2, so the line is $y = 2x + 5$. At $x = 4$, $y = 13$.
5	**C**	The interior angles of a hexagon sum to 720°, and $720° \div 6 = 120°$.
6	**C**	Range = largest minus smallest = $19 - 3 = 16$. The median is 8 and the mean is 10.
7	**A**	For independent events, multiply: $0.3 \times 0.5 = 0.15$.
8	**C**	$1{,}000 \times 1.1^2 = \$1{,}210$. Choice B is simple interest.
9	**C**	Surface area $= 2(4\times5 + 4\times6 + 5\times6) = 2(74) = 148$. Choice B is the volume.
10	**B**	Add the equations: $2x = 32$, so the larger number is 16.
11	**C**	$f(3) = 7$, and $g(7) = 49$. Choice B is $f(g(3))$.
12	**B**	$81 = 3^4$, so $x + 1 = 4$ and $x = 3$.
13	**B**	$x(x + 5) = 84$ gives $x^2 + 5x - 84 = 0$, or $(x + 12)(x - 7) = 0$. The width is 7 cm.
14	**C**	The ratio has 9 parts, each worth 20°. The largest angle is $4 \times 20° = 80°$.
15	**C**	With adjacent 3 and hypotenuse 5, the opposite side is 4. So $\tan\theta = 4/3$.

Your score: _____ / 15

13 to 15 correct: strong. **9 to 12:** review the missed topics. **Below 9:** revisit the basics before your next paper.

Section 3

Reading

10 questions | Suggested time: 11 minutes | Read each passage and choose the best answer to each question based on what is stated or implied.

Passage I: The Press and the Page (Humanities)

Before the fifteenth century, every book in Europe was copied by hand. A single volume could take a scribe many months, and only monasteries, universities, and wealthy families could afford more than a handful. Reading was something most people heard rather than did.

Johannes Gutenberg's printing press, introduced in the mid-1400s, changed the economics of the book. Movable metal type allowed printers to arrange a page once and print hundreds of copies from it. Within a few decades, presses operated in hundreds of towns, and the price of a book fell sharply.

Historians debate how far the press itself caused the changes that followed. Cheap books helped spread new religious and scientific ideas, but ideas also spread through letters, sermons, and travellers. What the press clearly did was increase the number of people with something to read, and this created a demand for schools, dictionaries, and standard spellings. In that sense, its influence reached well beyond the printed page.

1. According to the passage, before the fifteenth century books in Europe were:

- **A.** copied by hand.
- **B.** printed from wooden blocks.
- **C.** owned by most families.
- **D.** written only in local languages.

2. What did movable metal type make possible?

- **A.** Copying books faster by hand
- **B.** Selling books only to wealthy families
- **C.** Printing books in several colours
- **D.** Printing hundreds of copies from a page set only once

3. The passage suggests that, before the press, reading was:

- **A.** popular among most families.
- **B.** banned by the church.
- **C.** mostly something people heard aloud.
- **D.** taught in every village school.

4. The debate described in the third paragraph concerns:

- **A.** how much the press itself caused the changes that followed.
- **B.** why books became cheaper.
- **C.** when Gutenberg built his press.
- **D.** how many towns had presses.

5. The final sentence suggests that the press's influence:

- **A.** ended soon after it began.
- **B.** was smaller than that of letters and sermons.
- **C.** was limited to religious books.
- **D.** extended to schools, dictionaries, and spelling, not only books.

Passage II: The Rhythm of the Tides (Natural Science)

Twice a day, on most coasts, the sea rises and falls. The tides are caused mainly by the Moon's gravity, which pulls on the oceans and creates a bulge of water on the side of Earth facing the Moon. A second bulge forms on the opposite side, partly because Earth itself is pulled toward the Moon more strongly than the water on its far side. As Earth rotates, a coastline passes through both bulges each day.

The Sun also affects the tides, though less strongly because it is so much farther away. When the Sun, Moon, and Earth line up, at new moon and full moon, their pulls combine and produce unusually large “spring” tides. When the Sun and Moon pull at right angles, at the quarter phases, the tides are smaller; these are called neap tides.

Local geography matters too. In the Bay of Fundy in Canada, the shape of the bay amplifies the incoming water so that the difference between high and low tide can exceed fifteen metres. In the Mediterranean Sea, which is almost enclosed, the tidal range is often only a few tens of centimetres.

6. According to the passage, tides are caused mainly by:

- **A.** the Sun's heat.
- **B.** the Moon's gravity.
- **C.** winds over the oceans.
- **D.** Earth's magnetic field.

7. Why does the Sun affect the tides less strongly than the Moon does?

- **A.** It does not exert any gravity.
- **B.** It is much farther away.
- **C.** It sits at right angles to Earth.
- **D.** It is much smaller than the Moon.

8. According to the passage, spring tides occur when:

- **A.** the Moon is closest to the horizon.
- **B.** the Sun, Moon, and Earth line up.
- **C.** the Sun is hidden behind clouds.
- **D.** the Sun and Moon pull at right angles.

9. The Bay of Fundy example is used to show that:

- **A.** spring tides occur only in Canada.
- **B.** the Moon has no effect in enclosed seas.
- **C.** local geography can greatly increase the tidal range.
- **D.** tides are strongest in cold climates.

10. As used in the third paragraph, “amplifies” most nearly means:

- **A.** reflects away.
- **B.** slows down.
- **C.** hides.
- **D.** makes larger.

Answer Key: Section 3, Reading

Mark your paper, then count your correct answers. Read the explanation for every question you missed or guessed.

Q	Answer	Why it is correct
1	**A**	The first sentence says every book was copied by hand.
2	**D**	The second paragraph says printers could arrange a page once and print hundreds of copies.
3	**C**	The first paragraph says most people heard reading rather than did it.
4	**A**	The paragraph opens by saying historians debate how far the press caused the changes.
5	**D**	The sentence says the press's influence reached well beyond the printed page.
6	**B**	The first paragraph says the tides are caused mainly by the Moon's gravity.
7	**B**	The second paragraph says the Sun is so much farther away.
8	**B**	The second paragraph says alignment at new and full moon produces spring tides.
9	**C**	The third paragraph says the shape of the bay amplifies the water, giving a large range.
10	**D**	The bay's shape makes the tidal difference exceed fifteen metres, so it increases it.

Your score: _____ / 10

9 to 10 correct: strong. **6 to 8:** review the missed topics. **Below 6:** revisit the basics before your next paper.

Section 4

Science

10 questions | Suggested time: 10 minutes | Each passage is followed by questions. Refer to the passage and tables as needed. A calculator is allowed.

Passage I: Salt and Seed Germination

Students tested how salt and temperature affect the germination of radish seeds. Each dish held 20 seeds on damp paper, and the students counted the seeds that germinated after 5 days.

Experiment 1: The students kept the dishes at 20 °C and watered them with salt solutions of different concentrations. The results appear in Table 1.

Experiment 2: The students watered the dishes with plain water and changed the temperature. The results appear in Table 2.

Table 1

Salt (g per 100 mL)	Seeds germinated
0.0	19
0.5	18
1.0	14
2.0	7
4.0	1

Table 2

Temperature (°C)	Seeds germinated
10	6
15	14
20	19
30	17
40	3

1. In Experiment 1, as the salt concentration increased, the number of seeds that germinated:

A. stayed the same.
B. increased and then decreased.
C. decreased.
D. increased.

2. In Experiment 1, what percentage of the seeds germinated at 1.0 g per 100 mL?

A. 86%
B. 30%
C. 70%
D. 14%

3. According to Experiment 2, which temperature gave the most germination?

A. 40 °C
B. 10 °C
C. 30 °C
D. 20 °C

4. Based on both experiments, which conditions would most likely give the greatest germination?

A. No added salt at 20 °C
B. 2.0 g of salt at 20 °C
C. No added salt at 40 °C
D. 4.0 g of salt at 30 °C

5. Which variable was changed on purpose in Experiment 2?

- **A.** Temperature
- **B.** The number of seeds per dish
- **C.** Salt concentration
- **D.** The number of days

Passage II: Resistance in a Wire

Students measured the electrical resistance of nichrome wire. A higher resistance means the wire allows less current to flow.

Experiment 1: The students used wire of diameter 0.5 mm and changed its length. The results appear in Table 3.

Experiment 2: The students used wire of length 50 cm and changed its diameter. The results appear in Table 4.

Table 3

Length (cm)	Resistance (Ω)
25	2.0
50	4.0
75	6.1
100	8.0

Table 4

Diameter (mm)	Resistance (Ω)
0.25	16.1
0.50	4.0
0.75	1.8
1.00	1.0

6. In Experiment 1, as the length of the wire increased, the resistance:

- **A.** increased and then decreased.
- **B.** increased.
- **C.** stayed the same.
- **D.** decreased.

7. In Experiment 1, the resistance of the 100 cm wire was how many times the resistance of the 25 cm wire?

- **A.** 16 times
- **B.** 2 times
- **C.** 8 times
- **D.** 4 times

8. In Experiment 2, as the diameter of the wire increased, the resistance:

- **A.** stayed the same.
- **B.** increased.
- **C.** decreased.
- **D.** increased and then decreased.

9. Based on both experiments, which wire would most likely have the greatest resistance?

- **A.** 100 cm long with a diameter of 0.25 mm
- **B.** 100 cm long with a diameter of 1.00 mm
- **C.** 25 cm long with a diameter of 0.25 mm
- **D.** 25 cm long with a diameter of 1.00 mm

10. Based on Table 3, the resistance of a 60 cm wire of diameter 0.5 mm would most likely be closest to:

A. 2.4 Ω
B. 3.2 Ω
C. 7.2 Ω
D. 4.8 Ω

Answer Key: Section 4, Science

Mark your paper, then count your correct answers. Read the explanation for every question you missed or guessed.

Q	Answer	Why it is correct
1	**C**	The count falls from 19 to 1 as the concentration rises from 0.0 to 4.0 g per 100 mL.
2	**C**	14 of 20 seeds is 14 ÷ 20 = 0.70, or 70%.
3	**D**	Table 2 shows 19 seeds at 20 °C, the highest value.
4	**A**	Table 1 shows salt reduces germination, and Table 2 shows 20 °C works best.
5	**A**	Experiment 2 used plain water in every dish. Only the temperature changed.
6	**B**	Resistance rises from 2.0 Ω to 8.0 Ω as the length rises from 25 cm to 100 cm.
7	**D**	8.0 Ω divided by 2.0 Ω is 4.
8	**C**	Table 4 shows the resistance falls from 16.1 Ω to 1.0 Ω.
9	**A**	Resistance rises with length and falls with diameter, so the long, thin wire has the most.
10	**D**	60 cm lies between 50 cm (4.0 Ω) and 75 cm (6.1 Ω), so the value is between 4.0 Ω and 6.1 Ω. 4.8 Ω is the closest.

Your score: _____ / 10

9 to 10 correct: strong. **6 to 8:** review the missed topics. **Below 6:** revisit the basics before your next paper.

Your Next Steps

Add up your four section scores and note which section cost you the most marks. Spend your next study week on that section, then attempt a fresh paper under timed conditions.

Section	Your score	Out of
English	_____	15
Maths	_____	15
Reading	_____	10
Science	_____	10
Total	_____	**50**

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