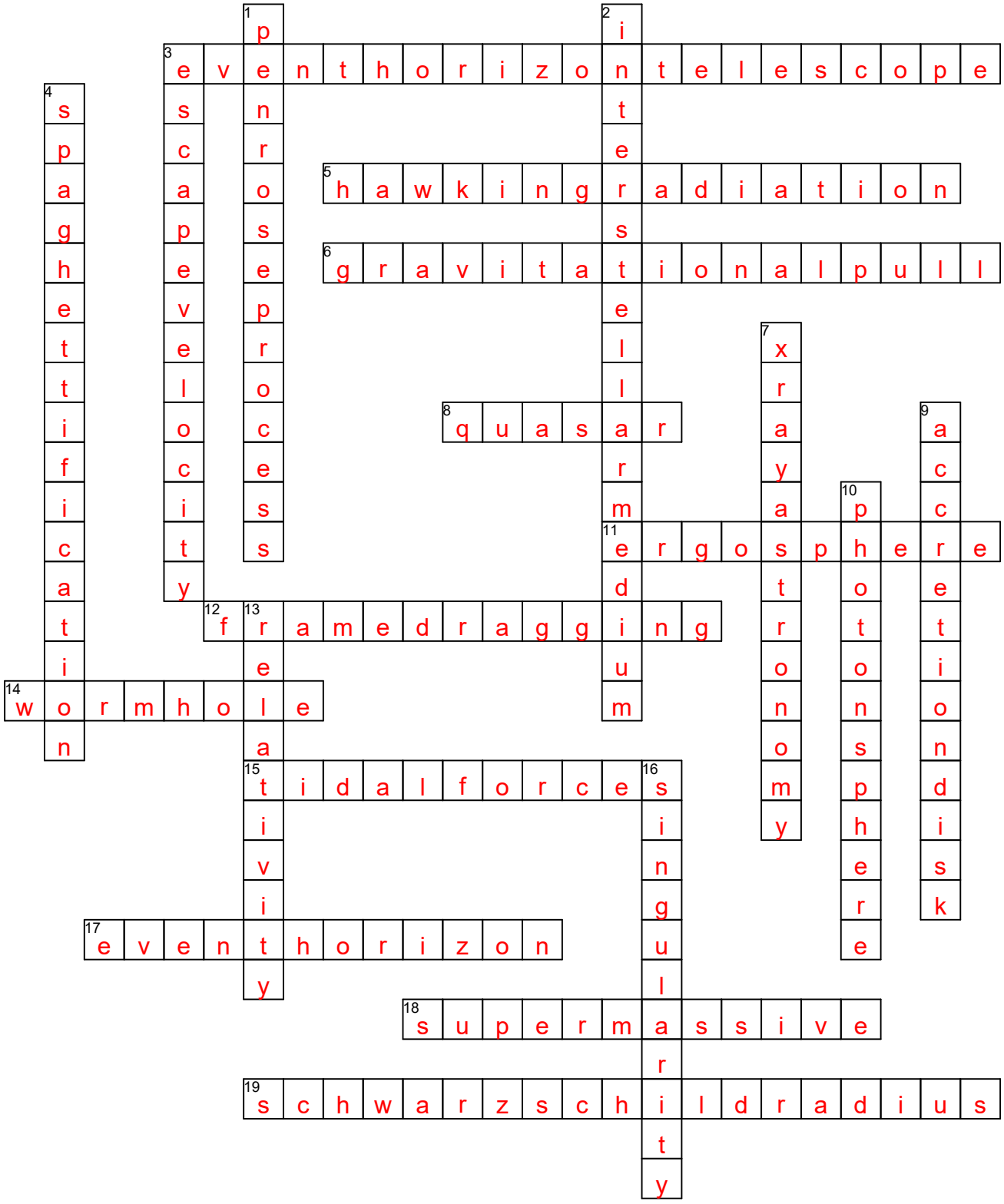
Black Holes Crossword Puzzle

1. *Using the Across and Down clues, write the correct answer in the numbered grid below.*



ACROSS

3. The network of telescopes that captured the first image of a black hole.
5. The theoretical radiation emitted by black holes due to quantum effects.
6. The immense force that draws objects into a black hole.
8. An energetic and distant celestial object powered by a supermassive black hole.
11. The region near a rotating black hole where objects can still escape but are strongly influenced by its spin.
12. The effect of a spinning black hole on nearby spacetime.
14. A hypothetical shortcut through spacetime that may connect black holes.
15. The differential gravitational forces experienced near a black hole.
17. The boundary around a black hole beyond which nothing can escape.
18. A classification of black holes with millions or billions of solar masses.
19. The distance from a black hole's center to its event horizon.

DOWN

1. A mechanism that extracts energy from a rotating black hole.
2. The material between stars that can feed into a black hole's accretion disk.
3. The speed needed to break free from a black hole's gravitational grip.
4. The stretching and elongation of objects as they approach a black hole.
7. The study of black holes through high-energy X-ray emissions.
9. A rotating disk of matter and gas that spirals into a black hole.
10. The region around a black hole where light can orbit in stable paths.
13. Einstein's theory that describes the behavior of gravity and spacetime.
16. The infinitely dense core of a black hole.

gravitational pull	Schwarzschild radius	supermassive
event horizon	X-ray astronomy	spaghettification
event horizon telescope	wormhole	escape velocity
frame dragging	interstellar medium	quasar
singularity	penrose process	accretion disk
ergosphere	relativity	Hawking radiation
tidal forces	photon sphere	