

Exercise:

1. Which of the following is not patentable subject matter under 35 USC 101?
 - a. A process
 - b. A natural law
 - c. A machine
 - d. A composition of matter

2. True or False
 - a. Albert Einstein could have applied for a patent on his formula: $E=mc^2$.
False

3. True or False
 - a. Isolated gene sequences are patentable subject matter.
False

4. True of False
 - a. The application of a natural law is patentable subject matter.
True

5. True or False
 - a. The following is patentable subject matter:
 - i. Administering a drug to a patient; and then
 - ii. Determining whether the drug is effective by examining biomarkers.

It depends on whether there is an inventive step. See *Mayo v. Prometheus*, 566 U.S. 132 (2012) & Question 6.

6. True or False
 - a. The following claim method was held to be patentable subject matter:
 - i. A method of optimizing therapeutic efficacy for treatment of an immune-mediated gastrointestinal disorder, comprising:

- a. (a) administering a drug providing 6-thioguanine to a subject having said immune-mediated gastrointestinal disorder; and
- b. (b) determining the level of 6-thioguanine in said subject having said immune-mediated gastrointestinal disorder,
- c. wherein the level of 6-thioguanine less than about 230 pmol per 8×10^8 red blood cells indicates a need to increase the amount of said drug subsequently administered to said subject and
- d. wherein the level of 6-thioguanine greater than about 400 pmol per 8×10^8 red blood cells indicates a need to decrease the amount of said drug subsequently administered to said subject.

False – Invalidated in *Mayo v. Prometheus*, 566 U.S. 132 (2012).

7. True or False

- a. The following claim method was held to be patentable subject matter:
 - i. A method of operating a rubber-molding press for precision molded compounds with the aid of a digital computer, comprising:
 - a. providing said computer with a data base for said press including at least, natural logarithm conversion data (\ln),
 - b. the activation energy constant (C) unique to each batch of said compound being molded, and
 - c. a constant (x) dependent upon the geometry of the particular mold of the press,
 - d. initiating an interval timer in said computer upon the closure of the press for monitoring the elapsed time of said closure,
 - e. constantly determining the temperature (Z) of the mold at a location closely adjacent to the mold cavity in the press during molding,
 - f. constantly providing the computer with the temperature (Z),
 - g. repetitively performing in the computer, at frequent intervals during each cure, integrations to calculate from the series of

temperature determinations the Arrhenius equation for reaction time during the cure, which is

- $\ln(v)=CZ+x$
 - where v is the total required cure time,
- h. repetitively comparing in the computer at frequent intervals during the cure each said calculation of the total required cure time calculated with the Arrhenius equation and said elapsed time, and
 - i. opening the press automatically when a said comparison indicates completion of curing.

True - *Diamond v. Diehr*, 450 U.S. 175 (1981). The Court held that a process or physical machine that makes use of a mathematical algorithm thereby "transforming or reducing an article to a different state or thing" is patentable.

8. True or False

a. The following claim method was held to be patentable subject matter:

- i. A method for updating the value of at least one alarm limit on at least one process variable involved in a process comprising the catalytic chemical conversion of hydrocarbons wherein said alarm limit has a current value of

- B_0+K

a. wherein B_0 is the current alarm base and K is a predetermined alarm offset which comprises

- (1) Determining the present value of said process variable, said present value being defined as PVL;
- (2) Determining a new alarm base B_1 ., using the following equation:

i. $B_1.=B_0(1.0 - F)+PVL(F)$

b. where F is a predetermined number greater than zero and less than 1.0;

- (3) Determining an updated alarm limit which is defined as $B_1.+K$; and thereafter

- (4) Adjusting said alarm limit to said updated alarm limit value.

False - *Parker v. Flook*, 437 U.S. 584 (1978). The Court held the invention was a law of nature and therefore not patentable.

9. True or False

- a. A proper specification contains a written description sufficient to make and use the invention.

True

10. True or False

- a. A proper specification contains a written description adequate to enable one of ordinary skill in the art to practice the invention.

True

11. True or False

- a. An examiner may properly reject an application for failing to disclose the best mode known in the art for practicing the invention.

False